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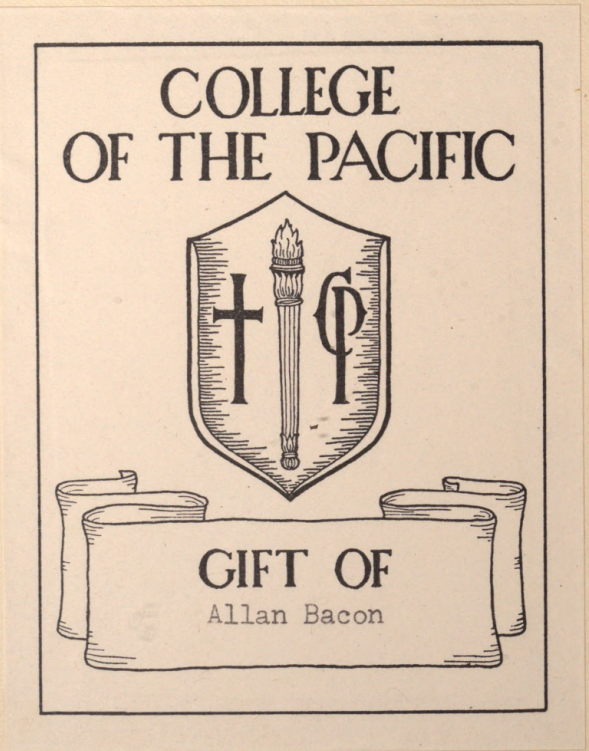
THE ORGANS
OF
ST. PAUL'S CATHEDRAL

By W. L. Sumner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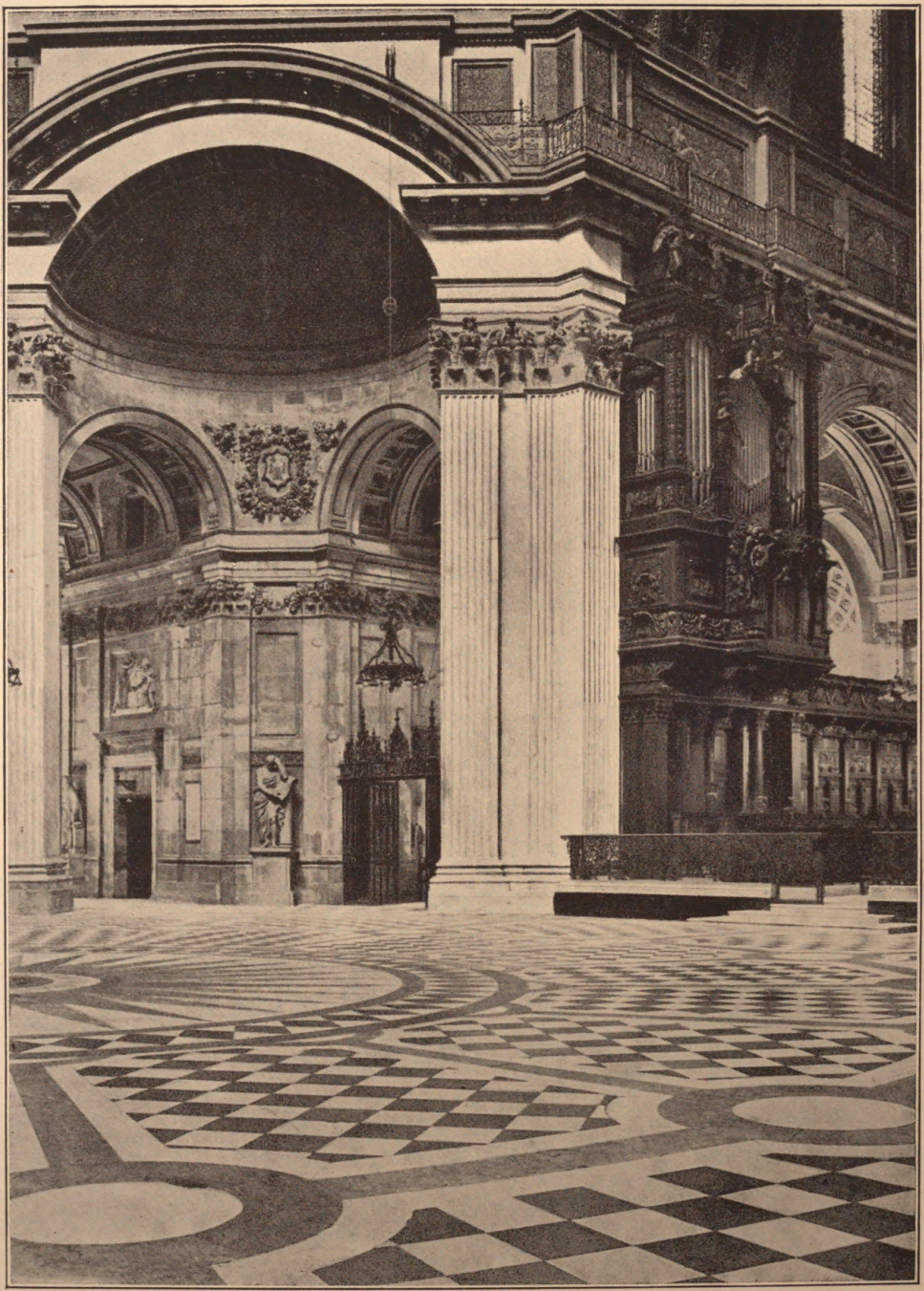
THE ORGANS OF ST. PAUL'S CATHEDRAL

TO HENRY WILLIS



Interior of St. Paul's Cathedral with the Organ

The fine pavement is shown unobscured by the seating arrangements

Photograph by Gilbert Benham

College of the Pacific
Stockton, Calif.

A History and Account

OF THE

ORGANS

OF

St. Paul's Cathedral
London

By W. L. SUMNER, A.K.C., B.Sc.

Price 2s. 6d. net

LONDON
"MUSICAL OPINION," 13, Chichester Rents, Chancery Lane, W.C.2
1931

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Foreword

THE ORGAN AT ST. PAUL'S CATHEDRAL has always attracted the admiration of musicians and laymen alike, not only by reason of its position and associations, but by the unique nature of its effects.

In this year of Grace, which marks the successful completion of repairs to the fabric of the Cathedral, and the reawakening of the tones of the organ through the vast spaces of the building, in more than their pristine glory, the instrument has been the centre of even more attention.

This little book does not claim to have exhausted every detail of its subject, which would require a much larger volume.

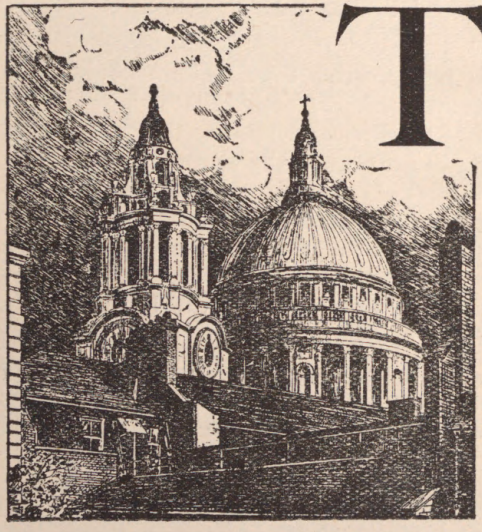
I am indebted to various articles in *The Organ* and *Musical Opinion*, but more so to the Rev. Andrew Freeman's admirable article in *The Organ* (No. 5, in Volume II.). I wish to thank Mr. Henry Willis and his staff for their kind and never failing help and reliable information; and Messrs. Hill and Norman & Beard for details of the Panopticon organ, which stood in the Cathedral for some years.

The charming sketch of the Cathedral used with the initial letter to the opening chapter is part of a larger drawing made from the Choir House by Mr. Cecil Brown, who kindly lent the original and gave permission for its publication.

W. L. SUMNER.

University College, Nottingham,
December, 1930.

Organs in Old St. Paul's



THE GREAT FIRE of 1666 not only destroyed the Cathedral, but the documents containing a good deal of its more intimate history also. Hence our knowledge of any musical instruments possessed by the building is largely a matter of conjecture. It is probable that by the year 1200 St. Paul's possessed several "pairs of organes[1]," as by this date such instruments were in general use in most English cathedrals. In Hopkins and Rimbault it is stated, without any authority or reference by which it could be verified, that the organ in the Cathedral at the time of the Great Fire was made by William Beton. It is suggested that this organ builder was identical with William Bylton of King's Lynn (allowing for the artistic variation which was permissible in the spelling of names in those days). Bylton worked during the first half of the sixteenth century, and it seems improbable that his instrument should have lasted more than a hundred years, without considerable repairs or improvements during that period. There is a famous old engraving of the interior of St. Paul's by Hollar (*c.* 1657), which shows an organ of considerable size, placed in the third bay of the choir over the stalls on the north side. As depicted, the organ had a good Gothic case, with carved gables at the top and painted

[1] The expression, "a pair of organs," does not imply plurality, nor does it signify that the organ had two manuals or keyboards. It is merely used in the same way as a "pair of bellows" or "a pair of stairs." The organs in question would be small "positive" organs ("positive" = fixed in position, or not carried in the hands), with small diagonal bellows and no great number of pipes.

doors at the side. There was also a choir organ, placed in front of the great organ case, and probably of a later date. Sanderson states that Robert Dallam, a leading builder of the seventeenth century, made an organ for St. Paul's. Without denying the possibility of this, the statement seems to be founded on the fact that Dallam built an organ for York Minster in 1632-4 and the following extract from *The Rites of Durham*:—

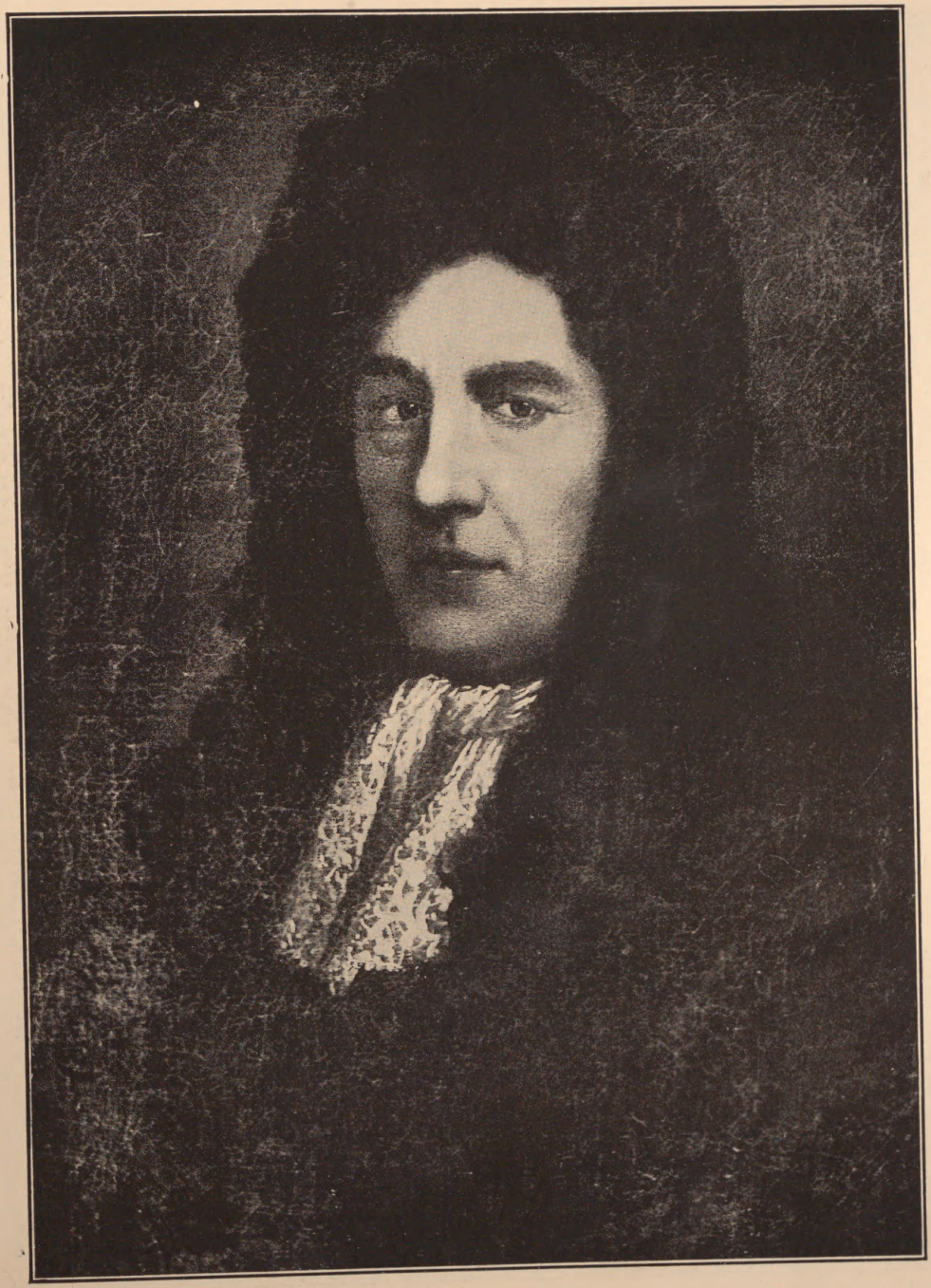
"*One of the fairest paire* [*of organs*] *of the three did stand over the quire dore, only opened and played upon at principall Feasts, the pipes beinge all of most fine wood and workmanship, very faire, partly gilded uppon the inside and outside of the leaves and covers up to the topp, with branches and flowers finely gilted with the Name of Jesus gilted with gold. There was but two pairs more of them in all Englande of the same makinge, one pair in Yorke, and another in Paules.*"

As the above refers to *c.* 1593, it is not possible that Dallam could have made any of the organs therein mentioned. At this date, a "paire of organes" would be a pair in more senses than one, for besides the great organ there would be a smaller and milder edition of it,—the chaire organ. The origin of this latter term is still somewhat obscure, but in this case, it probably means an organ, the pipes of which were built round and to the back of the organist's seat. It was, of course, the precursor of our modern "choir" organ.

It is more than probable that there was an organ in the Lady Chapel, in addition to the one shown in Hollar's drawing. The organs were not kept in the best of repair, however, as the following quotations from Dr. Sparrow Simpson's *Transcript of the Statutes of St. Paul's* (mentioning in particular the answers given at the Visitation of Bishop Bancroft on October 22nd, 1598) will show:—

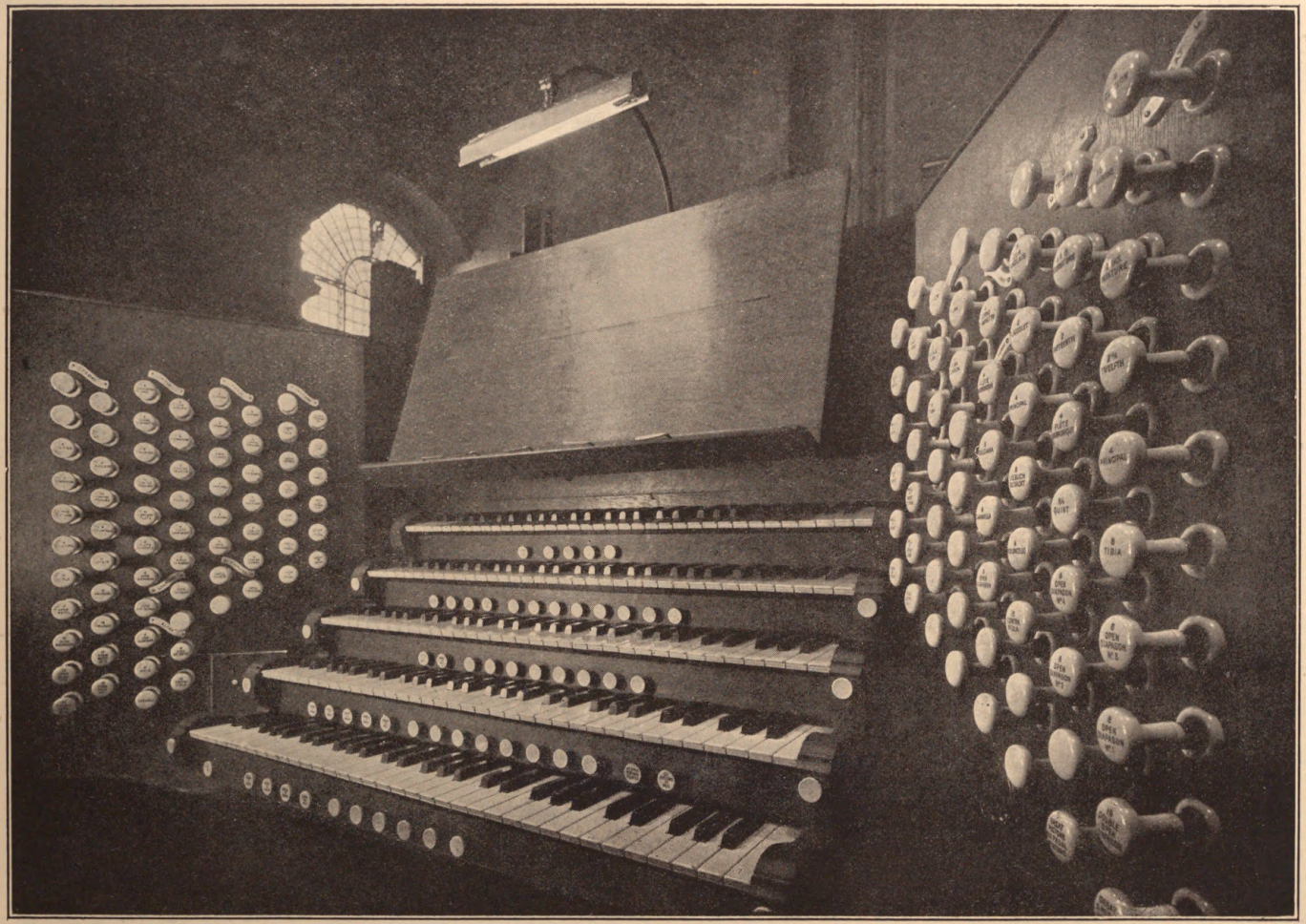
"*Item the Orgayns are so misvsed in the Blowing and other ways w^t^ jogging the bellowes that the Bellowes be broken and the winde is not sufficiente to give sounde to the instermente.*"

"*The Organe lofte is greatly abused by y^e^ bell ringers letting vp of many people for monye to y^e^ decaye of y^e^ instrument, y^e^ pipes being manye of them vnder feete, and* [*to*] *y^e^ hazardinge of y^e^ people vnderneath.*"



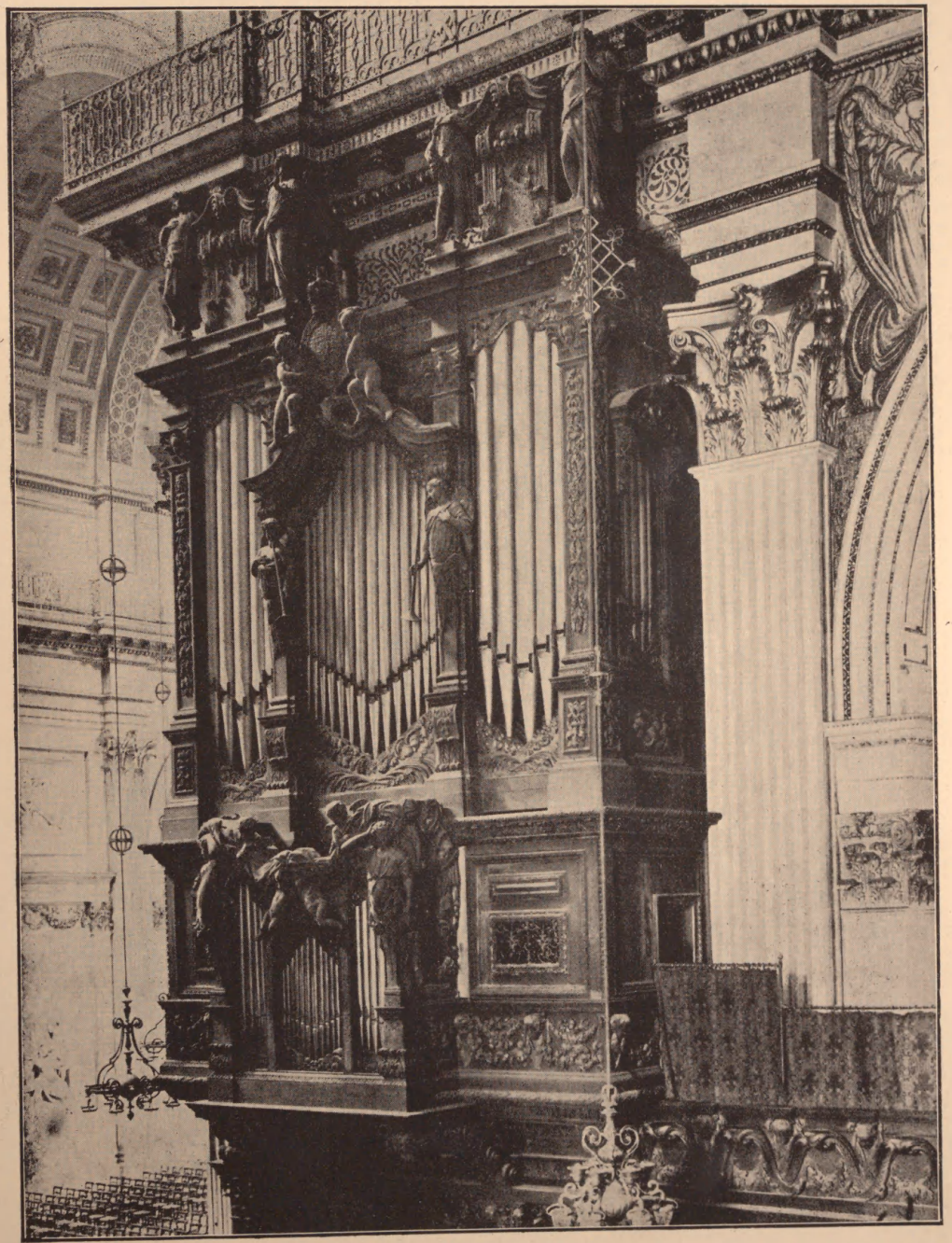
Lee: Smith

From an oil painting in the Examination Schools, Oxford
Reproduced by permission of the Curators of the Schools



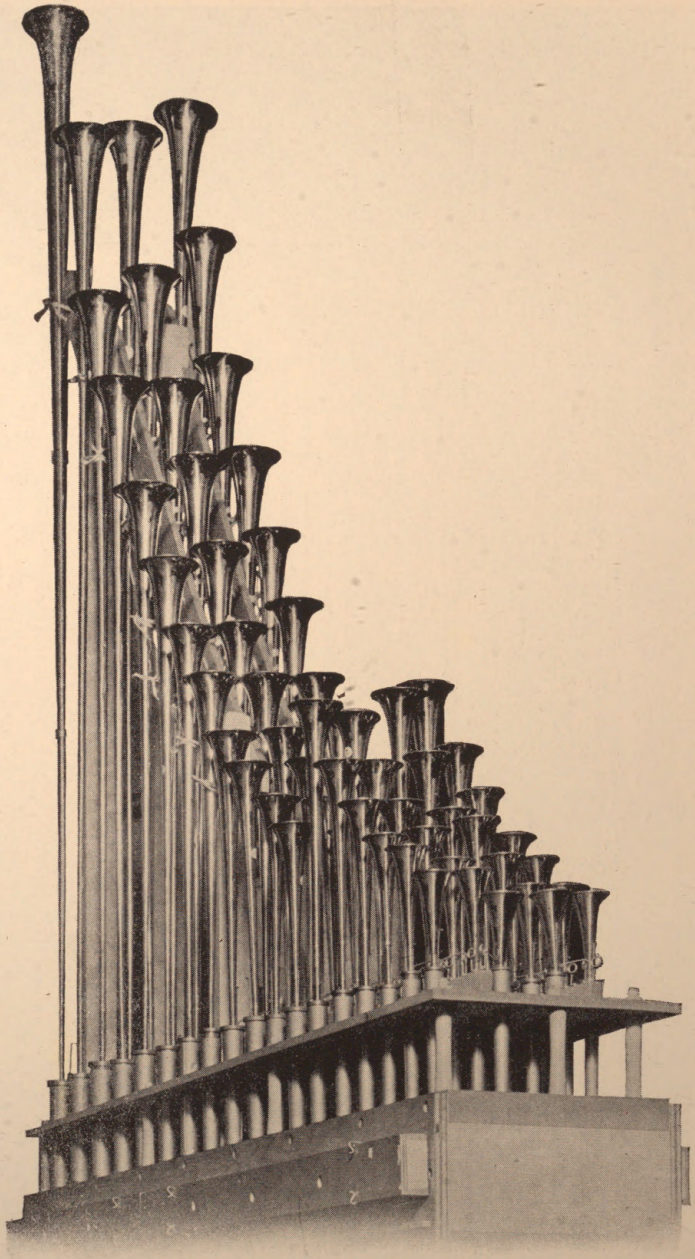
The New Console, as used with the 1926-1929 rebuild

Photograph by Gilbert Benham

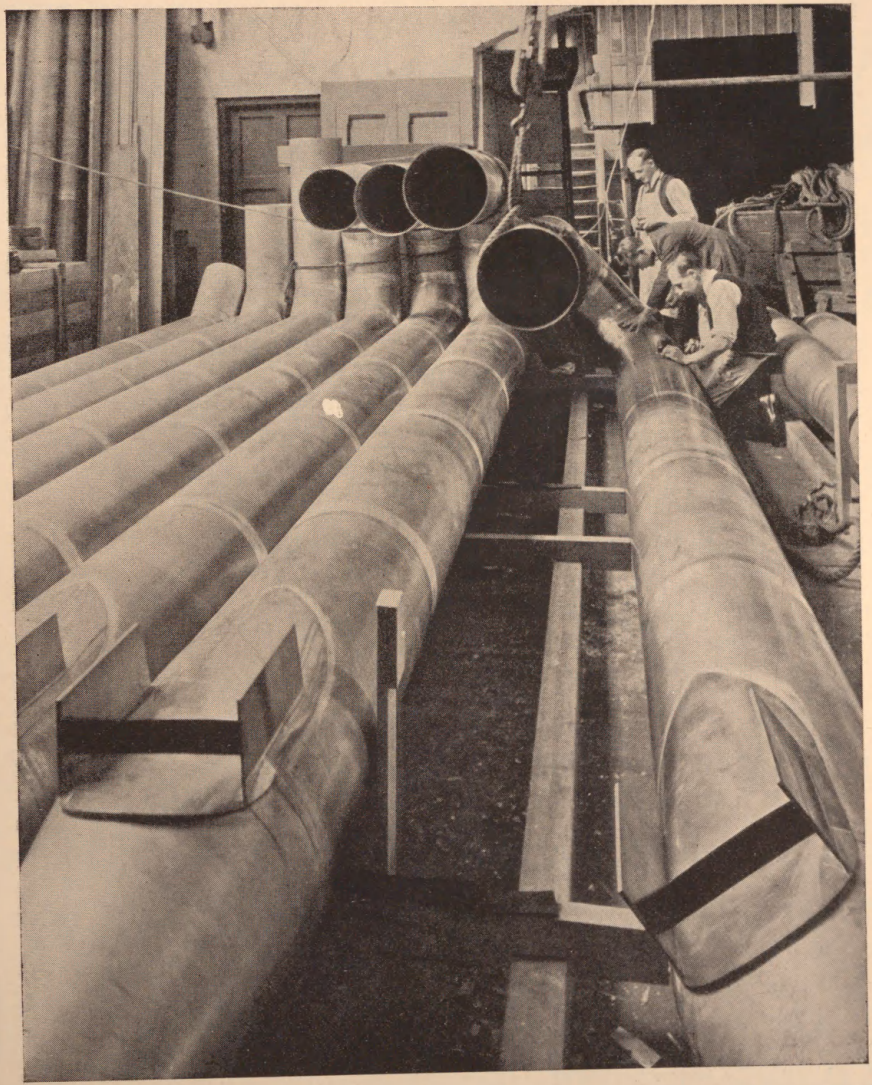


The North Case, part of that made for the Father Smith Organ

Photograph by Andrew Freeman

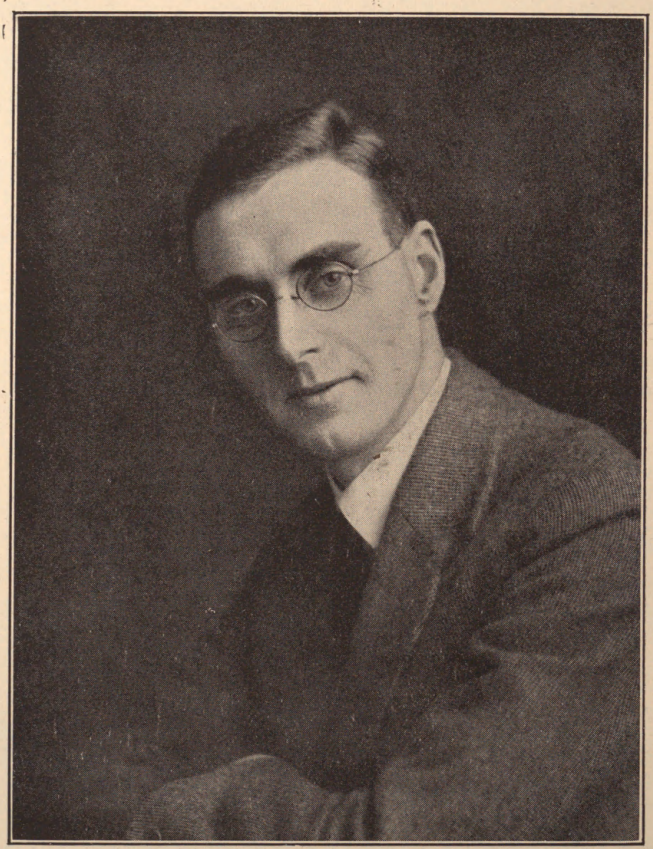


The new-type Trompette Militaire 8ft.
added to the Dome Tuba Section



A glimpse of the new 32ft. Pedal Contra Violone

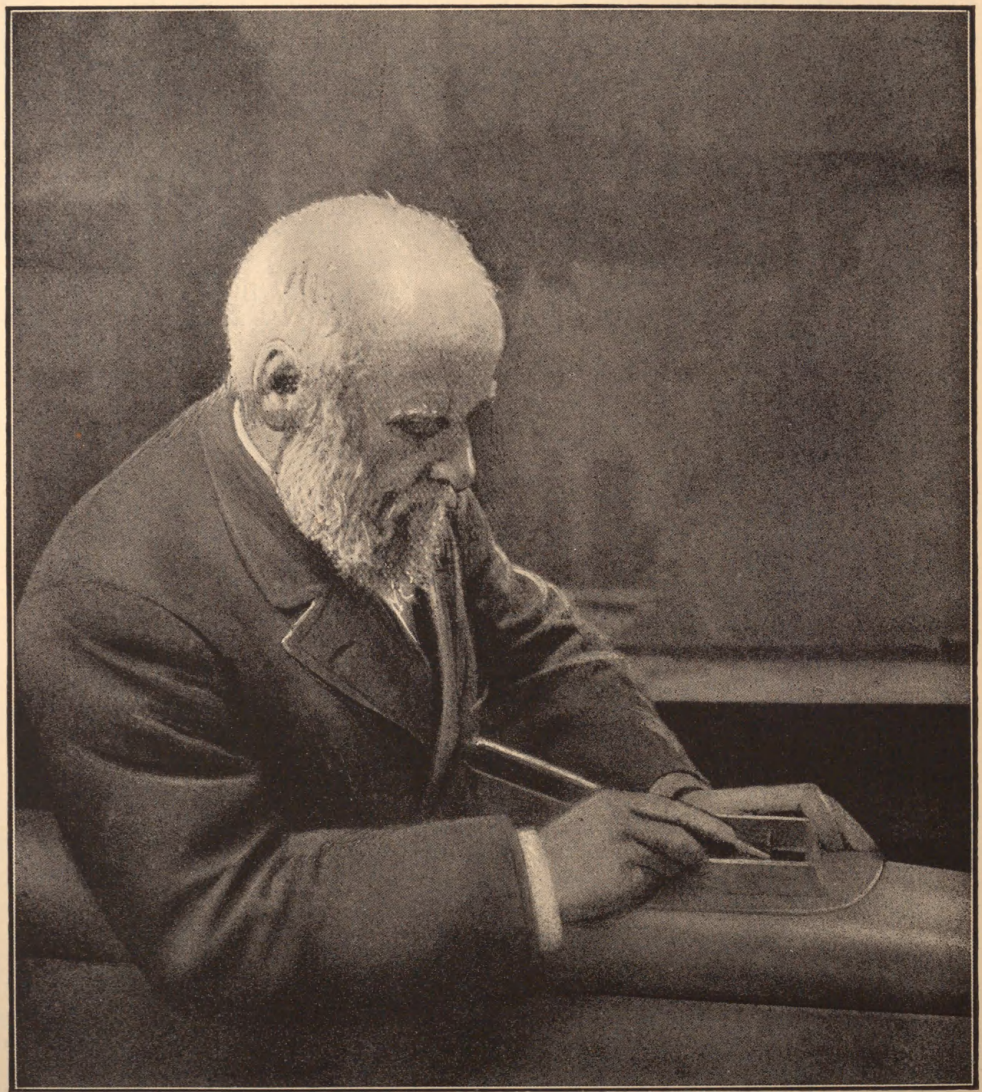
at Messrs. Willis's Works, prior to despatch to the Cathedral



Dr. Stanley Marchant

Photograph by Elliott & Fry, Ltd.

Mr. Henry Willis



Henry Willis, senior
(1821 - 1901)

The Present Instrument

THE PRESENT INSTRUMENT may be said to have developed from the organ built by Father Bernard Smith in the closing years of the seventeenth century. On December 2nd, 1697, the "quire" was opened for Divine Service on the occasion of the Thanksgiving for the Peace of Ryswick. The rest of the building was surrounded by a complicated mass of scaffolding and the dome had not yet been begun. To the west of the quire screen was a wall, separating the unfinished nave from the completed portion. The original agreement and specification of the organ in Smith's handwriting was preserved in the collection of Dr. W. H. Cummings.

Organ builder and architect failed to collaborate over the matter of the organ for the new Cathedral. Sir Christopher Wren made no secret of his desire to place the organ on the north side of the choir, as in the old building, and this would have preserved an uninterrupted view of the Cathedral from end to end. However, the Dean and Chapter decided that a screen should be erected at the dome end of the choir, and the organ was placed on this. After Wren had designed his case, Father Smith decided to extend his scheme, and take the compass of the manuals down to CCC. Wren, already annoyed at the interference which would be caused by the position of the organ to the view of the building from one end to the other, refused to enlarge the case; and thus, rather than sacrifice the long compass, Smith decided to omit certain ranks of pipes—although they were made—presumably for insertion after the death or retirement of Wren. Smith died before Wren, so the organ builder's wishes never materialised. It is probable that various pipes and fittings found in the organ many years after by Mr. J. C. Bishop, the organ builder, were the preparations which Smith had made for work on the organ after Wren's death.

The most apparent result of the extended compass was the ugly effect of the longest pipes, whose ends would be visible above the top of the case, and would ruin its fine appearance. To surmount this difficulty, Wren designed two altars to hide the excrescences, which were carved (with the rest of the case) by Grinling Gibbons. The effect is entirely pleasing. Gibbons was paid £610 18s. 2d. for the carving of the case. The octet of

oaken angels on the top of the organ case cost £20 each, and "The Draperry and whole Boys and two halfe Boys" were bought for £25. These embellish the choir organ case (now on the north side). When the organ was divided in 1872, a very clever copy of this was made to go in front of the part of the instrument at the south side.

The choir and great organ cases were originally fitted with window sashes and filled with glass, in order to exclude the dust from the interior of the organ. We have details of this arrangement: that the frames were made by Charles Hopson for £31 10s.; Grinling Gibbons carved them for £8 18s. 6d.; and eighty-nine panes of "Christalle" glass, costing £117 14s., and made by John Oliver, were used for glazing these sliding frames. These fittings were removed in 1826.

The following is a copy of the minutes of a committee meeting held on October 19th, 1694, to discuss with Smith, Wren and Dr. Blow the details of the new organ:—

"*The following Contract was considered approved and confirmed by the Comitee abovesaid: and was ordered to be entered in the Book of Contracts and Signed accordingly.*

"*Memo. That in pursuance of the Order first above written it was then agreed by the Dean and Chapter of St. Paul's and ye Surveyor of the Workes of St. Paul's Cathedral for and in the behalfe of the Rt. Honable ye Lords and others Com^rs^ for rebuilding and adorning ye said Cathedral, with Bernard Smith, Organ Maker, to make a large Organ containing 21 stops, part Wood and part Metall, and 6 halfe stops, according to Two Lists of ye said stops hereunder expressed as followeth:—*

"THE FFIRST LIST

"Stops in the Great Organ: *Two Open Diapasons, Stop Diapason, Principall, Great Twelfth, ffifteenth, Cornet, Mixtures, Sesquialtera, Trumpet.*

"Stops in ye Chayre Organ: *Principall, Stop Diapason, Hol fleut, Voice Humane, Crum horne, Echoes or halfe Stops, Diapason, Principall, Cornet, Trumpet.*

"THE SECOND LIST

"Stops in the Great Organ: *Hol fleut, Small Twelfth.*

"Stops in the Chayre Organ: *Quinta Dena Diapason, Great Twelfth, ffifteenth, Cimball, Echoes or halfe Stops, ffifteenth, Nason.*

"*And the said Bernard Smith doth hereby agree to make all ye said stops in workmanlike manner, together with all sound-boards, Conveyances, Movements and Bellowes thereunto appertaining, and to fix ye same and tune them perfectly according to ye best of his skill in ye Case that shall be set up and provided with all Ornaments, Carvings, and Gildings, and Outside painting over the Great Entrance of the Choire of St. Paul's at the Charge*

of ye said Comrs., the said Bernard Smith being only at the Expense of all ye inside work,—of ye Pipes, Conveyances and Movements as aforesaid to render it a compleat Instrument, from Double F faut to C sol fa in Alt. inclusive.

"*And the said Bernard Smith doth also Agree to set up and tune fit for use all ye stops expressed in the first of the aforesaid Lists at or before the ffive and Twentieth Day of September, which shall be in the year of Our Lord 1695. And the rest of the said Stops (expressed in the Second List) at or before Our Lady Day ensuing for the intire Sume of Two Thousand Pounds, to be paid in manner following (that is to say) ffowr Hundred Pounds in hand (the Receipt whereof he doth hereby acknowledge) and when ye Sound-Board and first Setts of pipes (expressed in ye first of the aforesaid Lists) shall be made and provided, the further sum of One Thousand Pounds, and the residue to make up ye intire sum, when ye said Organ shall with all ye stops be ffixed in the Case provided, and shall be approved by able Organists, and particularly Dr. John Blowe, Organist to their Maties. And such others as the Dean and Chapter of St. Paul's shall nominate. In Witnesse whereof the said Bernard Smith has hereunto set his hand the Day and year above written.*

"Witnesse. BER. SMITH

"JO. OLIVER

"LAW. SPENCER

"JOHN WIDOWS"

The great organ case of this organ was 30ft. high, 18ft. wide and 8ft. deep, and it was blown by four diagonal bellows, each 8ft. by 4ft.

It may be of interest at this point to give a few details of this so famous organ builder. Beyond the fact that he was a German by birth, practically nothing is known of the origin of Bernard Smith. There is a tradition to the effect that he learned his art in the establishment of Christian Former of Wettin, near Halle; but at any rate it is quite certain that his training was Continental. Shortly after the Restoration, he came to England; and there seems to be little doubt that Burney was right in stating that the first organ he built in England was for the Chapel Royal, Whitehall.

Among the more important of the organs Smith built in this country were St. Margaret's, Westminster; St. Mary-the-Virgin, Oxford; Christ Church Cathedral, Oxford; Manchester Cathedral; the Temple Church, London; Canterbury Cathedral; Durham Cathedral; St. Mary-the-Great, Cambridge; and the Banqueting House Chapel, Whitehall.

Smith's reputation as a skilled and honest craftsman stood very high; but it is as a tonal artist that he was so greatly esteemed in his day and since. He was surpassed in mechanical ingenuity by his famous contemp-

orary, Renatus Harris. Bernard Smith died in February, 1708, and was buried in the churchyard of St. Margaret's, Westminster.[2]

About 1712, Renatus Harris, who had been Father Smith's unsuccessful rival in the matter of the organs for the Temple Church (the "Battle of the Organs"), issued a proposal for erecting an organ over the great west door, which was to be used "for the Reception of the Queen [Anne], on all publick Occasions of Thanksgiving for the good Effects of Peace or War, and upon all State-Days, St. Cecilia's Day, the Entertainment of Foreigners of Quality and Artists, and on all Times of greatest Concourse, &c." The organ was to have six manuals, one of which was to be a "Swell," and a 32ft. stop on the pedals.

It is interesting to note that although there are many organs containing seven and more different departments, it has never been found desirable or necessary to employ more than five manual claviers in this country: indeed, four usually suffice. The only known copy of Harris's Proposal, printed as a three-page pamphlet, is kept in the library of St. Paul's Cathedral, and this is not quite complete. It is interesting to note that Joseph Addison mentions the pamphlet in *The Spectator* of December 3rd, 1712, as having been "frequently inclosed to him."

The six manuals were described as follows:—

"*The first set to be wholly appropriated for a grand* Chorus, *intended to be the most strong and firm that ever yet has been made.*

"*The second and third Sets to answer all Sorts and Varieties of Stops and to represent all Musical Instruments.*

"*The fourth to express the Echoes.*

"*The fifth to be a Chair or Small Organ, yet to contain more Pipes and a greater Number of Stops than the biggest Organ in* England *has at present.*

"*The sixth to be adapted for the emitting of Sounds to express Passion by swelling any Note, as if inspir'd by Human Breath; which is the greatest improvement an organ is capable of, except it had Articulation. On this set of keys the Notes will be loud or soft, by swelling on a long Note or Shake, at the Organist's Pleasure. Sounds will come surprising and harmoniously, as from the clouds, or distant parts; pass and return again, as quick or slow as Fancy can suggest, and be in tune in all Degrees of Loudness and Softness.*

"*By means of the Pedals, the Organist may carry on three Fugues at once and be able to do as much as if he had four Hands; for the Feet would act upon the Pedal-keys when the Hands were employ'd above.*"

Thus, the organ was designed to possess great, solo, choir, swell and echo organs, there being two solo manuals; and a pedal section which recognised the independent nature of the pedal part,—a fact which was barely thought of in England a century after.

[2] The curious in these matters will find much interesting information concerning his work in the Rev. Andrew Freeman's "Father Smith" (*Musical Opinion* Office: 7s. 6d. net).

As Harris was nearly Smith's equal in voicing, and probably his superior in the matter of mechanism, it is a pity that he was not allowed to realise his project in a practical form.

In another tract, *Queries about St. Paul's Organ*, which was the work either of Harris or of unscrupulous friends, we learn of his scheme to have placed a divided organ on the screen, thus anticipating Father Willis in 1872, but we cannot but deprecate the lengths to which Harris would go in order to bring his rival into poor esteem. The date of this document is *c.* 1698, and therein it is proposed that Harris would allow "a full and airy prospect of the Church, and Six Fronts with towers as high as requisite."

A copy of Harris's (1712) proposal follows :—

"A PROPOSAL

(BY RENATUS HARRIS, ORGAN BUILDER)

For the Erecting of an Organ in St. Paul's Cathedral, over the West Door, at the Entrance into the Body of that Church.

"*As Vocal Musick is the most perfect, so that sort of Instrumental which most resembles it, in its highest Perfection, must claim the Precedence of all others: in which Respect, the* ORGAN *is justly stil'd the king of Instruments; which has of late years receiv'd many Improvements, particularly by representing all Wind and String'd Musick; to which Improvements the Proposer presumes he has in some measure contributed: And upon this Occasion, thinks it necessary to give an Account how he came to the knowledge of swelling the Notes upon an Organ, because to this is owing the following Proposal.*

"*It has been look'd upon as impracticable, by the ablest Judges in Musick, to divide a note into twelve distinct Parts. The Proposer having asserted, that he would undertake to divide a Note into a hundred Parts, clearly distinguishable by a Musical Ear, did accordingly, in a full Assembly of Musical Gentlemen, Masters of the Faculty, and other Artists, on Tuesday in* Whitsun-*week, 1700, perform that Operation on an Organ then standing in his Work-house, now in* St. Andrew's *Church in* Holborn, *to their full and entire Satisfaction, and for the Conviction of the Curious in that Art, is ready to repeat the Experiment.*[3] *This Performance gave the Proposer a Notion of the swelling of the Notes upon the Organ, which he finds to answer upon Tryal, tho' look'd upon equally impracticable with the other, and therefore most humbly submits the following Proposal to the Consideration of her Majesty, and both Houses of Parliament.*

"*This Organ shall contain a double double Diapason, the Profundity of which will comprehend the utmost Notes of Sound. In this Stop shall be Pipes forty Foot long, and above two Foot Diameter; which will render this Organ vastly superior in Worth and Value to the other Diapason Organs;*

[3] Thus anticipating, by many years, similar work by Koenig and Scheibler.

and that the rest of the work may bear a due Proportion, it shall consist of six entire Sets of keys for the Hands, besides Pedals for the Feet.

"*The first Set, to be wholly appropriated for a grand* Chorus, *intended to be the most strong and firm that ever has yet been made.*

"*The second and third Sets to answer all Sorts and Varieties of Stops, and to represent all Musical Instruments.*

"*The fourth to express the Eccho's.*

"*The fifth to be a Choir or Small Organ, yet to contain more Pipes and a greater Number of Stops, than the biggest Organ in* England *has at present.*

"*The sixth to be adapted for the emitting of Sounds to express Passion by swelling any Note, as if inspir'd by Human Breath; which is the greatest improvement an Organ is capable of, except it had Articulation. On this Set of Keys, the Notes will be loud or soft, by swelling on a long Note or Shake, at the Organist's Pleasure. Sounds will come surprising and harmoniously, as from the Clouds, or distant Parts, pass, and return again, as quick or slow as Fancy can suggest; and be in tune in all Degrees of Loudness and Softness.*

"*By means of the Pedals, the Organist may carry on three Fugues at once, and be able to do as much as if he had four Hands; for the Feet would act upon the Pedal-Keys, when the Hands were employ'd above, and the Sound would be proportionately strong; which in the grand* Chorus *in so vast a Church, ought to be as strong and bold as possible; and therefore Pedals are us'd in all the great Organs beyond the Seas.*

"*If at the charge of the Publick, such an Organ were built in the Place propos'd, which is the most proper to give the Design its full and desir'd Advantage, such an Instrument, containing more Beauties and Variety than all the most celebrated Organs, as it would be by far the compleatest in its kind, so it would be suitable to the Grandeur of so stately a Fabrick.*

"*Sir, The inclos'd* Proposal *takes its rise from the organ I set up in* Salisbury *Cathedral in* 1710, *which was begun some Years since for a Church in* London, *as a Master-piece of great Value to have been paid for by Subscription, and was made capable of emitting Sounds to express Passion by swelling any Note, as if inspir'd by Human Breath. But the Place where it is now fix'd, not being proper for that Performance, which requires the Situation to be against a Wall, for the Sound to strike but one way, it loses that Advantage; and yet being prepar'd for that Intent, there may be more Varieties express'd thereon than by all the* Organs *in* England, *were their* several *Excellencies united. You are desir'd to observe that the propos'd* Organ *for St.* Paul's *is intended to be plac'd at a great Distance from the Choir, and not to interfere with the present* Organ *in the Performance of the Service, being chiefly consider'd in its Situation for the Benefit of swelling the Notes, and study'd to be in all Respects made the most artful, costly, and magnificent Piece of Organ-work that has hitherto been invented. The use*

of it will be for the Reception of the Queen on all publick Occasions of Thanksgiving for the good Effects of Peace or War, upon all State Days, St. Cecilia's Day, the Entertainment of Foreigners of Quality and Artists, and on all times of greatest Concourse, &c. And by the Advice and Assistance of Sir Christopher Wren, the external Figure and Ornaments may be contriv'd so proportionable to the Order of the Building, as to be a decoration to that part of the Edifice, and no Obstruction to any of the rest. This Instrument will be of such Reputation to the Kingdom as will far surmount the Expence of it, which will be easy whenever her Majesty and the Parliament shall farther think fit to enlarge their Bounty to St. Paul's Church, by appointing a Sum out of the same Revenue which built it, or any other way, as they in their great wisdom shall judge proper for the Ornament and Grandeur of the State Church of the City which is the chief of her Majesty's extensive Dominions."

Apart from the grandeur of conception of this proposed organ, which unfortunately never materialised, the means of "swelling a note" is the most intriguing thing about it. The first authenticated use of the swell was in 1712, when Abraham Jordan boxed the pipes of one of the keyboards in his organ at St. Magnus, London Bridge. The rising and falling of the intensity of the sound was secured by raising or lowering a lid, and the matter was advertised in *The Spectator*, February 8th, 1712, as never having been in any organ before. Hence, it would appear that Harris's method did not require a box. It is probable that he employed a number of ranks of similar pitch and quality and by some sliding contrivance brought them on in turn with a sort of crescendo action.[4] This serves to explain why Harris had been led to the idea by his experiments on the division of notes (or tones), for then he would have been using a considerable number of pipes of similar quality and only differing in length by a small amount. The question of interference (miscalled "sympathy"), which occurs when similar pipes are sounded together, serves to show why it was necessary for the organ to be against a wall for securing the best results, as the reflection of the sound would limit the formation of nodes or places of comparative silence.

* * * * *

After Smith's death, his widow was allowed a sum of £500—in July, 1708—for work which Smith had done over and above his contract, in particular, the extension of the compass to CCC.

In 1720, the organ was enlarged by Christopher Shrider,[5] the principal improvements being the addition of toe-pedals, pulling down the lower notes of the great organ (there were no pedal pipes), and the fitting of a swell box to the echo organ.

[4] This system, using ten or eleven ranks of string toned pipes, has been tried in America in recent years and, indeed, is still used.

[5] Shrider was Smith's foreman in business, and afterwards his successor. Shrider's first wife was a daughter of Smith's first marriage.

The following extract from the Wages Book, No. 45, refers to this work :—

1720-21. Xtopher Shrider Musical Instrut. Maker for Cleaning and Repairing the Organ, all the Pipes & Movements and for adding sevll. new Springs	*45*	*0*	*0*
For Adding six large Trumpet Pipes down to 16 Foot Tone to be used with a Pedal or without	*36*	*0*	*0*
For the Pedal and its Movements	*20*	*0*	*0*
For adding the Loudning and Softning (that is) the Swelling Note & its Movements & other things thereto belonging ...	*12*	*0*	*0*
	113	*0*	*0*
Deduct on this Bill	*13*	*0*	*0*
	100	*0*	*0*

Some authorities maintain that "pull downs" were fitted to the organ by Smith shortly before his death; but the above extract seems to be definite on this matter. Burney tells us how Handel delighted in playing this organ, "for the exercise it afforded him in the use of the pedals." Often the master would get himself locked in the Cathedral after 3 o'clock prayers, and (divested of his outer garments) play until a late hour,—the organist (Dr. Greene) having such an admiration for him that he would act as his bellows blower. In view of the above, it is remarkable that many have denied the introduction of pedals into England until a much later date.

Shrider looked after the instrument for at least a quarter of a century. He received £95 in 1725 "for mending, cleaning and repairing the Organ in several parts, improving and tuning the whole, and assisting the workmen about ye great pipes." His name appears again in 1741, 1742 and 1746 for minor repairs. Shortly after this John Crang came on the scene, and in 1749 he was paid £7 17s. 6d. for tuning. Eight years later, the same builder received £123 5s. 6d. for alterations, the chief of which was the addition of a new but inadequate swell organ. Crang's name occurs again in entries in 1766 for £4 18s. 4d., in 1767 for £19 12s. 4d., and with that of Hancock in 1774 for £30.

John Byfield was employed on the organ at various times from 1776 to the end of the century; and there is a record of William Gray in 1801, who received six guineas, evidently for tuning.

The indefatigable Mr. Henry Leffler, an English organ enthusiast, who was unique in his day for his knowledge of English organ specifications, noted down the contents of the organ as it stood at the beginning of the nineteenth century :—

1800

GREAT ORGAN
CCC (no CCC sharp) to C pp.

Open diapason (east)	60
Open diapason (west)	60
Stopped diapason	60
Principal	60
Nason	60
Twelfth	60
Fifteenth	60
Tierce	60
Block flute	60
Sesquialtera (4 rks)	240
Mixture (3 rks)	180
Cornet, from C sharp (5 rks)	120
Trumpet	60

PEDALS
Two octaves of "pull-downs"
No pedal pipes

CHOIR ORGAN
FFF (no FFF♯ nor GG♯) to C pp.

Stopped diapason	54
Principal	54
Flute	54
Twelfth	54
Fifteenth	54
Mixture, 3 rks	162
Cremona	54
Vox humana	54

SWELL ORGAN
tenor C to C

Open diapason	37
Stopped diapason	37
Principal	37
Cornet, 3 rks	111
Trumpet	37
Hautboy	37

"A fine organ all through: sharp pitch."[6]

In 1803 Messrs. Ohrmann & Co. received £264 12s. for taking the organ to pieces, cleaning it, and lowering the pitch a semitone, which needed the addition of several large pipes. It is on record that Ohrmann, "a most industrious Swede," succumbed to the effects of a cold caught at work on the organ. Some accounts of the matter mention a similar fate for his partner, W. Nutt, but there seems to be no foundation for this.

Alexander Cuming is mentioned in 1801 as having inspected the organ, for which he received five guineas.

Important modifications were made in 1826 by J. C. Bishop, who probably was the leading English builder of that date. His policy of suppressing the old shrill cornets, his invention of concussion bellows to steady the supply of wind in particular chests, and his use of the clarabella stop are well known.

Bishop removed the "toe pedals," and substituted the more useful German variety, he added concussion bellows, and replaced Smith's four diagonal bellows with a horizontal bellows. In addition to this he replaced the trebles of the chorus stops with pipes which were not so noisy, extended the manual compass to F in alt, and added an octave of independent pedal pipes. The specification of the organ underwent the following changes:—

GREAT
Treble of stopped diapason replaced by clarabella
Nason replaced by clarion
Cornet replaced by No. 2 trumpet

CHOIR
Mixture replaced by open diapason
Vox humana replaced by dulciana

[6] From Dr. C. W. Pearce's *Notes on English Organs*, which is a transcript of the notebook of Mr. Henry Leffler.

Again in 1849 the same builder removed the old black keyboards and substituted new ones, added a new swell to gamut G, and replaced the metal flute on the choir by a viol di gamba. As left by Bishop, the specification of the organ was as follows :—

1850

GREAT ORGAN
CCC to F (*16ft. compass), 65 notes
Open diapason (east)
Open diapason (west)
Stopped diapason (clarabella treble)
Principal
Twelfth
Fifteenth
Large fifteenth (a block flute)
Tierce
Sesquialtera, 2 rks
Mixture, 2 ranks
Trumpet
Trumpet (to middle C)
Clarion

SWELL ORGAN
Gamut G to F (5⅓ft. compass), 47 notes
Open diapason
Stopped diapason
Principal
Sesquialtera, 3 rks
French horn
Hautboy
Trumpet

CHOIR ORGAN
FFF to F (12ft. compass), 59 notes
Open diapason
Stopped diapason
Dulciana
Viol di gamba
Principal
Twelfth
Fifteenth
Cremona (tenor C)

PEDAL ORGAN
CCC to C, 25 notes
Pedal pipes (1 octave of wood), 16ft.

COUPLERS
Swell to great
Swell to choir
Great to pedal
Choir to pedal

4 composition pedals

(*) It is noteworthy that despite the paucity or absence of the pedal organ in these old organs the long manual compass allowed for a variety in the bass which was absent when the manuals were cut down to the present CC and a quite inadequate pedal organ substituted.

Towards the year 1860, the services of the Cathedral became very popular, and large congregations were drawn by the distinguished preaching of Dale and Melvill, canons in residence.[7] The choir was cut off from the rest of the building by the organ screen, and therefore a rearrangement was decided upon. Having discovered in the archives of the Cathedral an original drawing by Sir Christopher Wren which showed the organ in one of the bays of the choir (as in Hollar's sketch of Old St. Paul's), Mr. Penrose (the architect) was glad to feel that at last he could carry out the wishes of the designer of the building.[8] The organ screen and its returned stalls were removed and the organ was placed above the stalls under the second arch on the north side. In this buried position, the lower part of the case and the choir organ case could not be utilised.

In Advent, 1858, the Special Sunday Evening Services were estab-

[7] An old organ by Gray, containing two manuals and an octave and a half of open pedal pipes was erected in the west gallery by Bishop, and stood there from April to November, 1851. This temporary organ was called for by the lack of accommodation in the choir for the increased attendance at Sunday afternoon services.

[8] It is interesting to note that Wren did not allow for the organ screen originally; and therefore six columns, which interfere with the vaulting of the crypt, had to be placed there to take the weight of the screen and the organ thereon.

lished; and the novelty of the idea, enhanced by the striking effect of the golden ring of gas jets below the Whispering Gallery, attracted large crowds of people. The inadequacy of the organ in the choir, to accompany the singing of the people under the Dome, was only too apparent

What was probably the most complete organ in London—a large four-manual instrument by Hill, until then standing in the Panopticon of Science and Art, Leicester Square—was purchased by the Cathedral authorities and placed in the south transept on a gallery with Ionic columns of Rondone marble. It is said that the modest sum of five hundred pounds was paid for this instrument, the specification of which was as follows:—

The South Transept Organ: c. 1860-1873

Manuals CC to G, 56 notes. Pedal CCC to E, 29 notes

GREAT ORGAN

Double open diapason (wood & met.)	16
Open diapason, No. 1	8
Open diapason, No. 2	8
Stopped diapason	8
Quint	$5\frac{1}{3}$
Octave	4
Octave quint	$2\frac{2}{3}$
Superoctave	2
Sesquialtera	III rks
Mixture	III rks
Furniture	III rks
Wald flöte	4
Double trumpet	16
Posaune	8
Clarion	4

CHOIR ORGAN

Double stopped diapason	16
Gamba	8
Dulciana	8
Stopped diapason	8
Gemshorn	4
Flute (metal)	4
Octave quint	$2\frac{2}{3}$
Superoctave	2
Cymbal	II rks
Flute	2
Trumpet	8
Bassoon and clarinet	8

COUPLERS

Swell to great	Choir to pedal
Solo to great	Swell to pedal
Choir to great	Solo to pedal
Great to pedal	3 tremulants

SWELL ORGAN

Double and bourdon	16
Open diapason	8
Hohl flöte	8
Stopped diapason	8
Octave	4
Suabe flöte	4
Octave quint	$2\frac{2}{3}$
Superoctave	2
Sesquialtera	III rks
Cornopean	8
Trumpet	8
Oboe	8
Clarion	4

SOLO ORGAN

Tuba mirabilis	8
Tuba mirabilis	4
Claribel	8
Dolcan	4
Piccolo	2
Krum horn	8
Vox humana	8
Doublette	II rks
Vox angelica	8

PEDAL ORGAN

Double open diapason (wood)	32
Open diapason (wood)	16
Open diapason (metal)	16
Octave	8
Octave quint	$5\frac{1}{3}$
Superoctave	4
Sesquialtera	V rks
Trombone	16
Clarion	8

Drums, triangles, tambourines, &c. 3 composition pedals to great, 3 composition pedals to pedal. Keyboard duplicated so that four players could perform together. Pneumatic levers to great and elsewhere, also composition pedals, the great composition pedals being arranged to connect the pedals. (At its new home in St. Paul's, the organ was used as a "church" instrument, and the duplicated "consoles," "traps," &c., were not required.)

During the thirteen years in which this instrument stood in the Cathedral it had no case-work except that of the Wren-Smith choir organ, which stood in front of it. The Byzantine case, which effectively adorned the organ in its original home, was thought to be too secular, and thus was not used. In 1873, when the divided organ rendered the South Transept instrument unnecessary, the latter was removed to the Victoria Rooms at Clifton. Later, it was broken up and the parts used in other instruments.

The position of the Smith-Bishop organ, as rebuilt by W. Hill under the arch, was unsatisfactory, and the lack of power was accentuated by an unwise reduction of the wind-pressure to 2½in. The organist, John Goss, and his brilliant assistant George Cooper, protested against their buried position; and so, in 1863, began the association of the firm of Willis with the organ. Henry Willis raised the console so that it was on a level with the top of the stalls. The spot can still be seen, for a join in the panels at the back of the second, third and fourth stalls from the east is plainly visible. Mr. Willis added pneumatic pistons and pneumatic action to the great organ, raised the wind pressure to 5in., restored that of the flue work to 3in. and revoiced the whole organ:—

1862

GREAT ORGAN
CCC to F (16ft. compass)

*Double diapason	16
Open diapason	8
Open diapason	8
Stopped diapason	8
Principal	4
*Harmonic flute	4
Twelfth	2⅔
Fifteenth	2
*Harmonic piccolo	2
Sesquialtera	III rks
Mixture	III rks
*Orchestral hautboy	8
Posaune (new)	8
*Trumpet	8
*A reed	8
Clarion (new)	4

COUPLERS

Swell to great superoctave
Swell to great unison
Swell to great suboctave
Swell to choir
Choir to great
Swell to pedal
Great to pedal 16ft.
Great to pedal 8ft.
Choir to pedal

SWELL ORGAN
CC to F (8ft. compass)

Double diapason	16
Open diapason (new bass)	8
Stopped diapason	8
Principal	4
Sesquialtera	III rks
Horn	8
Trumpet	8
Hautboy	8

CHOIR ORGAN
FFF to F (10⅔ft. compass)

Open diapason (gamut G)	8
Viol d'amore (gamut G, new)	8
Dulciana (gamut G, new)	8
Stopped diapason	8
Principal	4
Harmonic flute (new)	4
Fifteenth	2
Clarinet	8

PEDAL ORGAN

Open diapason	16
Violone	16

Stops marked (*) were prepared for

Pneumatic pistons to great and swell, those for the great being also acted upon by pedals. Pneumatic action to the great and its couplers. Wind pressures: flue work 3in., reed work 5in.

Following a meeting and appeal for funds at the Mansion House in 1870, which was attended by the Lord Mayor and Mr. Gladstone, the

Decorations Committee of the Cathedral decided to rearrange the choir and organ, in order to make possible the utilisation of the space beneath the dome for all services.

The idea of dividing the organ was claimed by Dr. Sparrow Simpson, who would have preferred to see the organ back on its own screen, even so. Be this as it may, the credit rests with Father Willis, for without his skill with pneumatic action, nothing of a satisfactory nature could have been done in this matter. The original case was divided into two parts and an additional choir case—which is a faithful replica of Gibbons's original work on the north side—was placed on the south side, and the effect, as it still is to-day, was superb.

The organ itself, both mechanically and tonally, was a revelation, containing as it did beautifully balanced departments and individual stops of great charm. The swell has never been altered since this rebuild, and the great has only undergone minor extension. The solo organ of six stops was considered to be very complete. Here the organ lost its Father Smith personality finally, and came into the Willis line; though the best of Smith's work was retained.

It is interesting to note that Willis assisted in the playing of the organ for the first time after this rebuild. The occasion of the Thanksgiving for the Recovery of the Prince of Wales in February, 1872, demanded that the organ should be used in its incomplete state, the contract period not having expired. A temporary pedal-board was connected to the pedal pipes, in the lower stages of the organ, and here Willis played; while George Cooper, the brilliant sub-organist of the Cathedral, presided at the manuals inside the original choir case. This was so successful that nobody could divine that there were two players by hearing the instrument.

The parts of the organ were disposed as follows:—

NORTH CASE:	Great in three stages
	Solo above great
	Console in Smith choir case

The pedal organ was in a cramped position behind the stalls in the first arch. The 32ft. pipes required great holes to be cut in the stone foundations and the bourdon had to be omitted on account of lack of room. The pedal violone, which was the original west front diapason of the Smith organ, formed the front of the south side.

SOUTH CASE:	Swell at the back, in three stages
	Choir in the new choir case

The hydraulic blowing apparatus proved an intolerable nuisance, owing to its leaking; and in 1880 it was supplanted by a Crossley gas-engine and four of Willis's patent blowing cylinders,[9] two for high and two for low pressure, and these gave unfailing service until 1925.

[9] Examples of Willis's blowing cylinders may still be seen preserved in South Kensington Science Museum.

1872

Manuals CC to A. Pedal CCC to F

GREAT ORGAN

Double diapason (open)	...16
Open diapason (large)	... 8
Open diapason (small)	... 8
Claribel flute	... 8
Quint	...$5\frac{1}{3}$
Principal	... 4
Flûte harmonique	... 4
Octave quint	...$2\frac{2}{3}$
Superoctave	... 2
Fourniture	III rks
Mixture	III rks
Trombone	...16
Tromba	... 8
Clarion	... 4

CHOIR ORGAN

Bourdon	...16
Open diapason	... 8
Dulciana	... 8
Violoncello	... 8
Claribel flute	... 8
Lieblich gedact	... 8
Principal	... 4
Flûte harmonique	... 4
Flageolet	... 2
Corno di bassetto	... 8
Cor anglais	... 8

COUPLERS

Solo to great — Choir to great
Swell to great superoctave
Swell to great unison
Swell to great suboctave
Solo to pedal — Swell to pedal
Great to pedal — Choir to pedal
Ventil pedal

SWELL ORGAN

Contra gamba	..16
Open diapason	... 8
Lieblich gedact	... 8
Salicional	... 8
Vox angelica	... 8
Principal	... 4
Fifteenth	... 2
Echo cornet	III rks
Contra posaune	...16
Cornopean	... 8
Hautboy	... 8
Clarion	... 4

SOLO ORGAN

Flûte harmonique	... 8
Concert flute	... 4
Corno di bassetto	... 8
Oboe	... 8
Tuba magna	... 8
Clarion	... 4

PEDAL ORGAN

Double diapason	...32
Open diapason	...16
Violone	...16
Octave	... 8
Violoncello	... 8
Mixture	III rks
Contra posaune	...32
Grand bombarde	...16
Clarion	... 8

16 pneumatic pistons, 4 to each manual
4 composition pedals to great and pedal
1 pedal (double action) for great to pedal
1 pedal for swell to great unison

"Pneumatic and tubular-pneumatic action throughout."

The wind was supplied by three bellows placed in the crypt (each with four feeders) worked by three hydraulic engines.

Extensive enlargement and rebuilding of the organ took place between 1897 and 1900, the period being so protracted because it was necessary to leave some part of the instrument playable. In consultation with Mr. Somers Clarke, the Surveyor to the Fabrick, the larger part of the pedal-work, and the new tubas, were placed in the north-east quarter gallery, and the action to this section was electric.

The dome divisions were blown by a small high-pressure hydraulic plant, taking water at a pressure of 600 lb. to the square inch. The chancel divisions, worked by the blowing cylinders, were fitted with Willis's patent

(1889) pneumatic action, and thus they spoke a fraction of a second after the electrically driven dome organ, which allowed for the time taken by the tone in descending from the north-east quarter gallery. The specification of the swell organ remained unaltered; the solo was much enlarged and placed in the swell box (except the 8ft. flute), under the western arch on the north side. Here it was buried so low that much of its effect was lost. The great had some notable additions to its unison diapasons, minor changes were made in the choir organ, and a new four-stop altar-organ, enclosed in a swell box and playable from the solo keys, was placed over the stalls on the north side near the altar. Five stops of the pedal remained under the western arch and two tubas over the north case.

The specification of the organ was as follows:—

1900

s = Smith, 1697
b = Bishop, 1826 and 1849
w = Willis, 1872
unmarked = Willis 1897-1900

Manuals CC to C, 61 notes Pedal CCC to G, 32 notes

GREAT ORGAN

Double diapason		m	16 s
(four lowest by Willis)			
Open diapason 1		m	8 w
Open diapason 2		m	8
Open diapason 3		m	8 s
Open diapason 4		m	8
Open diapason 5		w	8
Quint		m	5⅓ w
Principal		m	4 w
(twenty-two lowest except CC; s)			
Flûte harmonique		m	4 w
Twelfth		m	2⅔ w
Fifteenth		m	2 w
(twelve lowest except CC; s)			
Fourniture		m	III rks w
Mixture		m	III rks w
Trombone		m	16 w
Tromba		m	8 w
Clarion		m	4 w

SWELL ORGAN w
(Willis, 1872)

Contra gamba	m	16
Open diapason	m	8
Lieblich gedackt	w & m	8
Salicional	m	8
Vox angelica (tenor C)	m	8
Principal	m	4
Fifteenth	m	2
Echo cornet	m	III rks
Contra posaune	m	16
Hautboy	m	8
Cornopean	m	8
Clarion	m	4

CHOIR ORGAN

Contra gamba	m	16 s
(treble by Willis, 1897)		
Open diapason	m	8 w
Violoncello	m	8 w
Dulciana	m	8 w
Lieblich gedackt	w & m	8 w
Clarabella	w	8 w
Principal	m	4 w
Flûte harmonique	m	4 w
Flageolet	m	2 w
Corno di bassetto	m	8 w
Cor anglais	m	8 w

SOLO ORGAN
(enclosed except flute 8ft.)

Open diapason	m	8
Gamba	m	8
Flute	m	8 w
Flûte harmonique	m	8
Concert flute	m	4 w
Piccolo	m	2
Contra fagotto	m	16
Contra posaune	m	16
Corno di bassetto	m	8 w
Cor anglais	m	8
Orchestral hautboy	m	8 w
Cornopean	m	8
Trumpet	m	8

ALTAR ORGAN
(playable from solo keys; in swell box controlled by solo swell pedal)

Contra gamba	m	16
Gamba	m	8
Vox angelica, II rks (tenor C)		8
Vox humana	m	8

TUBA ORGAN

Dome section

Double tuba	... ...	m	...16
Tuba	... ...	m	... 8
Clarion	... ...	m	... 4

Chancel section

Tuba	... ...	m	... 8 w
Clarion	... ...	m	... 4 w

(none of the tubas is enclosed)

PEDAL ORGAN

Dome section

Double diapason (open)	...	w	...32 w
Open diapason	... ...	w	...16 b
Open diapason	... ...	w	...16 s
(lower part Willis, 1897)			
Open diapason	... ...	m	...16
Principal	... ...	m	... 8 s
Violoncello	... ...	m	... 8 w
Mixture	... ...	m	III rks w
Contra posaune	... ...	w	...32 w
Bombarde	... ...	m	...16 w
Clarion	... ...	m	... 8 w

Chancel section

Open diapason	... ...	w	...16
Violone	... ...	m	...16
Bourdon	... ...	w	...16
Octave	... ...	w	... 8
Ophicleide	... ...	m	...16

COUPLERS

Swell to great super
Swell to great unison
Swell to great sub
Dome tubas to great
Chancel tubas to great
Tuba to solo (never completed)
Solo to swell
Swell to choir
Solo on } both can be used at the
Altar on } same time
Tuba to pedals (in duplicate)
Solo to pedals
Swell to pedals (in duplicate)
Great to pedals (in duplicate)
Choir to pedals (in duplicate)
Great pistons to composition pedals
Swell pistons to composition pedals
Tremulant to altar

ACCESSORIES

Pistons :
4 to tuba. 6 to solo
6 to swell 8 to great
6 to choir
Great to pedal on and off
Dome and chancel tubas to great on and off
8 general pistons in the key cheeks acting on the other pistons
6 composition pedals to pedal
Cantoris, Decani, Succentor } Three signals for speaking tube
*Hydraulic blowing

WIND PRESSURES

Great :	Flue work 3½in. (bass) and 5in. (treble) ; reeds 7in.
Swell :	Flue work 3½in.; reeds 7in.
Choir :	Flue work (except flûte harmonique) 3½in.; reeds and flûte harmonique 4½in.
Altar :	3½in.
Solo :	Contra posaune and trumpet 17in.; contra fagotto, cor anglais, cornopean 7in.; other reeds and flue work 3½in.
Tuba :	*Dome :* 20in. (bass) and 25in. (treble)
	Chancel : 14½in. (bass) and 17in. (treble)
Pedal :	*Dome* : flue work 3½in.; contra posaune 6⅝in., bombarde and clarion 20in.
	Chancel : flue work 3½in.; ophicleide 17in.

* When the knob "hydraulic engine" was drawn, "action" wind from a crypt blowing plant filled a small bellows (a pneumatic "motor"), which acted upon weights and started the hydraulic engines, taking water at 600 lb. to the square inch, which raised the wind for the dome.

It is interesting to note that as this organ was being finished, two players would accompany the service simultaneously. The swell and choir, together with a couple of pedal stops, were completed first; and, played from a temporary console on the south side, were used to accompany the service.[10] As the great organ on the other side was nearing completion, another organist playing at the proper console could help with the heavier work of the organ, when it was desirable.

The 1900 rebuild worked well, with little attention for over a quarter of

[10] The console of the 1900 rebuild has been kept intact, and is preserved in Rehearsal Room of the Cathedral.

a century, and doubtless would be working yet but for the alterations which were effected at the time of the recent restoration and strengthening of the Cathedral fabric. The chain of events leading to the closing of the dome, the splendid response with which the nation met the appeals for subscriptions to defray the cost of repairs, and the establishing of the services in the west of the nave, with a continuation of the music for which St. Paul's is famous, need no mention here.

In entrusting the work to Mr. Henry Willis, grandson of Father Willis, the Cathedral authorities secured the highest skill possible both in the mechanical (and electrical) and the tonal side of organ building, and also were assured that the tonal ideals already established should not be departed from.

The instrument was taken down from its old position in the chancel during the first part of the year 1925, and Mr. Willis drew up a scheme for re-erecting it in the nave with the cases in an equivalent position to that which they had occupied in the chancel, but with the difference that the swell and choir organs, and 32ft. open diapason from the dome, would be on the north side, and the great, solo, and part of the pedal, together with the console, on the south side.

Had this scheme been accepted, the beautiful appearance of the organ cases would have been retained, and the organist would have been in a better position for hearing his instrument. In deference to the wishes of the architects, the organ was actually re-erected on the north side so that it occupied the first two arches, and the side aisle behind. The swell and choir organs were placed, respectively, behind, and to the west of, the Wellington monument on their own supports. The wooden 32ft. open was brought down from the dome, and, with the great, solo, chancel pedal and tuba organs, was placed on a platform at a height of 15ft. from the floor. In a word, the organ was built round, but not to the south of the Wellington monument, and the space beneath the platform was useful, as it could serve as a temporary vestry or robing room.

The position of the new electro-pneumatic console was unfortunate, but it was the best that could be found. Although screens were fitted to "protect" the organist, the effect of the swell organ was still overwhelming. When playing with the great flue work coupled to the swell the former was practically inaudible at the console, though in the nave the beauty and balance of the tone were all that could be desired, and no one could have divined the difficulties under which the organist was working.

It was not possible to bring down the rest of the dome pedal and tuba organs, nor to utilise the altar organ. These were disconnected and remained just as they were until the work of bringing the instrument to its present state was put in hand. The organ in its temporary position was enclosed in parts of the old main cases, but the choir cases and the sides of the old cases could not be utilised. This makeshift case, together with the Wellington monument, made an effective combination.

1926 to 1929

GREAT ORGAN

Double open diapason	16
Open diapason 1	8
Open diapason 2	8
Open diapason 3	8
Open diapason 4	8
Tibia *wood*	8
Quint	$5\frac{1}{3}$
Principal	4
Flûte harmonique	4
Twelfth	$2\frac{2}{3}$
Fifteenth	2
Fourniture	III rks
Mixture	III rks
Trombone	16
Tromba	8
Clarion	4

TUBA ORGAN

Tuba	8
Tuba clarion (chancel tubas)	4

SWELL ORGAN

Contra gamba	16
Open diapason	8
Lieblich gedackt *wood and metal*	8
Salicional	8
Vox angelica	8
Principal	4
Fifteenth	2
Cornet	III rks
Contra posaune	16
Cornopean	8
Hautboy	8
Clarion	4

PEDAL ORGAN

*Double open bass *wood*	32
*Open bass 1 *wood*	16
Open bass 2	16
Open metal (from great double)	16
Violone	16
Bourdon *wood*	16
Viola (from choir)	16
*Octave *wood* (extension of open bass No. 1)	8
Principal	8
Ophicleide	16

(*) from Dome

SOLO ORGAN
(enclosed)

Open diapason	8
Viola da gamba	8
Flûte ouverte	8
Flûte harmonique	8
Concert flute	4
Piccolo	2
Contra posaune	16
Contra fagotto	16
Trumpet	8
Cornopean	8
Corno di bassetto	8
Cor anglais	8
Orchestral oboe	8

CHOIR ORGAN

Contra viola	16
Open diapason	8
Violoncello	8
Lieblich gedackt *wood & metal*	8
Clarabella *wood*	8
Dulciana	8
Principal	4
Flûte harmonique	4
Flageolet	2
Corno di bassetto	8
Cor anglais	8

COUPLERS

Choir to great
Swell to great octave
Swell to great
Swell to great suboctave
Solo to great
Chancel tubas on great
Swell octave
Swell suboctave
Solo to swell
Swell to choir
Solo to choir
Tubas to choir
Solo octave
Solo suboctave
Tubas to solo
Solo on
Tuba to pedal
Solo to pedal
Solo to pedal 4ft.
Swell to pedal
Swell to pedal 4ft.
Great to pedal
Choir to pedal

COUPLERS—*continued*
Great pistons on pedal pistons
Great and pedal pistons coupled
Swell pistons on pedal pistons
Pedal stops off
Lever pedals on

ACCESSORIES
Reversible pistons
Great to pedal coupler
Swell to great coupler
Choir to great coupler
Solo to great coupler
Tubas to great
Great and pedal pistons coupled
Great pistons on pedal pistons
Swell to pedal coupler
Choir to pedal coupler
Swell to choir coupler
Solo to choir coupler
Tubas to choir coupler
Solo to pedal coupler
Tubas to solo coupler
Tubas to pedal coupler

Locking piston for piston adjusters
†Pistons
8 to great. 8 to swell. 6 to choir
8 to solo. 4 to tuba
Pedal pistons
†8 to pedal.
8 duplicating swell pistons
Reversible combination pedals
Great to pedal
Tubas to great
Pedal stops off
Balanced swell pedals
1 to swell. 1 to solo
(duplicated by lever pedals; shutter control by electro-pneumatic action)
2 reversible pedal piston spares
4 general pistons acting over entire instrument, all adjustable at the console

† all adjustable at console on new Willis system

As there was a lack of variety in the softer stops of the chancel pedal organ (though this was more apparent on paper than to the hearer), the great double open diapason 16ft. and the choir contra viola were derived to pedal. Of the console and action, which were electro-pneumatic on the new Willis pattern, more will be said later; but in order to show the convenience of electricity, it may be stated that the work of connecting the large five manual console to the instrument was begun on a Thursday afternoon and the organ was used on the following Saturday morning. The action is simple and compact, and stands in great contrast to the miles of bulky "compo" tubing, &c. The (new) organ was blown by the present "Duplex" blowers electrically driven.

Fortunately, the repairs to the cathedral were effected in less time than was originally feared, and it became evident, as the work continued, that it would be possible to re-open the whole of the building in June, 1930, in more than its pristine glory. The organ was dismantled from its temporary position in July, 1929, and the work of re-erecting the instrument in its old place was proceeded with at once. During this operation the services were accompanied with the small two manual Willis organ which has been kept in the Cathedral for cases of emergency. This instrument was placed near the Wellington monument, and received its wind from the main plant. Although, by its nature, lacking in power and variety, the little organ was surprisingly effective, and the handling of it by the organist and his assistant must have been a lesson to many who are always grumbling at the meagreness of the resources of their own instruments. A large organ is by no means a necessity for revealing the musicianship and "organ instinct" of the player. The work of bringing the organ to its present state was not without difficulties, for owing to the activities of the stone masons and other workmen in the Cathedral thick gritty dust was constantly settling on the organ, and it speaks much for the patience of the organ

workmen that they surmounted these troubles. Since the days of Father Smith, organ building in St. Paul's Cathedral has never been plain sailing, for architects, surveyors of the fabric, and the diligence of the workmen carrying out their wishes, have always to be reckoned with when the unfortunate organ builder starts his work.

The re-opening of the Cathedral in June, 1930, was marked by unusual rejoicing, and — what are all too rare at St. Paul's—organ recitals. The daily papers in commenting on the event gave the highest praise to the organ, although the many other beauties of the Cathedral might have taken more of their attention. This is proof, if need be, of the way in which this superb instrument has captured the imagination of the layman.

Before commenting on each division of the organ, a few general remarks are necessary. The re-building has been a conservative one as regards the tonal scheme. There has been no re-voicing of swell reeds so that they sounded like English horns finally, or other atrocities which have been perpetrated on the masterpieces of Father Willis. When Henry Willis III. rebuilds an organ he approaches it reverently, and does not try to submerge its original identity in his own forceful and personal schemes. That which has been conscientiously and faithfully done is left as a tribute to the man who made it. For instance, many a builder might have thought that twelve stops were inadequate for the swell organ of so large a building as St. Paul's Cathedral, but to "improve" such a section would have been to spoil it, and he would have been a bold man who could point to a more effective full swell anywhere. The organ must be considered in relation to the tasks which it has to perform. It has never been used as a recital organ of the concert type. The musical services at St. Paul's often take the form of oratorio performances, where the organ is assisted by a band or orchestra. Orchestral imitations are not required for this purpose, but what is needed is a good pedal organ, the basic diapason work, and occasional "splashes" of full swell. There is no vox humana, tremulant,[11] or carillon on the whole organ, and the nearest approach to modern célestes is the gentle vox angelica of the swell organ. None of these "string" stops can be called keen in the modern sense of the word. To the writer, who is unable to tolerate célestes or tremolo effects, this is a matter of rejoicing; but even those critics who love these little additions to the tonal equipment of the organ must admit that their absence is never felt. Everything, except the action, has been replaced in its old position as far as possible, and there is nothing in the whole instrument which is out of keeping with the true church organ tradition.

Great Organ

Beyond the addition of two stops, and the removal of one, the great organ is little altered. The flue work, despite the five diapasons, is by no means overpowering, and one does not wonder why the great to fifteenth on this organ is so often quoted as a perfect example of *mezzo-forte*

[11] There is now a tremolo to the four stops of the altar organ only.

brilliant, transparent tone. In accordance with modern (and logical) ideas, the redundant flûte harmonique has been removed, and its place taken by a principal No. 2 taken from the choir. It is time that it was recognised that a great organ containing three or more unison diapasons needs at least two 4ft. stops of diapason tone. Flute tone, especially of the harmonic variety, forms no part of a great organ chorus: it does not blend, and therefore should be excluded. The wood open diapason has been re-named tibia, but it has nothing in common with the all-pervading "hooting" tone which is, unfortunately, so often associated with this name. A new lieblich bourdon of fine clear tone now supplies the need for a second double; and this, with the second principal, considerably enhances the accompanimental value of the great organ.

Swell Organ

The swell organ has been left just as it was, for it is difficult to know how it could be improved. At the reopening, *The Times* critic compared its uplifting effect to the elation experienced by Handel when he composed the *Hallelujah Chorus* and saw the heavens open. As the glory of the full swell has often been cited, it is interesting to note that its effect is entirely dependent on the unison and the double reeds and the mixture, and the flue work may be put in with no appreciable loss. The space occupied by the swell in the south case is surprisingly small. Several people have said to me that they thought that the pipe-work behind the two cases extended backwards and under arches. This is not so, as the cases are against solid piers of stone, and the space inside them is quite limited. The softer stops of the swell organ are very beautiful, and each has a distinct personality. The mild string tones of the vox angelica and salicional are in pleasing contrast to the violent string tones which seem to have become the fashion and which quickly pall upon the ear.

Choir Organ

The principal, now on the great, has been replaced by a gemshorn, and a couple of mutation ranks of gemshorn tone have been added.[12] The gemshorn, though esteemed in Germany and America, is not fully appreciated in this country. Its tapering pipes, when properly voiced, yield a tone of delicate beauty which is very pleasing. Messrs. Willis use two types of mutation pipes,—viz., the soft rohr flöte and the rather bolder gemshorn. Many years ago Cavaillé-Coll used a very complete gemshorn mutation division on the grand choir manual at Notre Dame, Paris. Unfortunately, difficulties in tuning seriously detract from the effectiveness of most French mutations, but the perfect tuning of the English separate mutation ranks

[12] The tierce is of open metal, and the diameter at the top is one-third of that at the mouth. This is in the old German *baroque* style. The nazard is of gedackt tone (stopped metal). These separate mutations have been designed especially for giving great variety to the *mezzo-forte* choir tone. No extension has been used here or elsewhere on the organ, except to a trifling extent on the pedal. *Separate* mutation ranks must be counted a necessity to any instrument claiming completeness.

enables them to be used for that fascinating study in registration,—synthetic tone building. The trumpet is the old solo cornopean, remodelled and revoiced, and with its comparatively free tone completes the choir *ensemble.* The choir, as can be seen from the specification as well as by hearing it,is a unified whole and not merely a conglomeration of unrelated stops "dumped" there for want of a better position.

Solo Organ

The main shortcoming of the solo organ in its old position was that it was buried beneath and behind the north choir stalls. Although it may sound an exaggeration, the solo reeds, despite their age, have never been excelled as examples of reed voicing; but they spoke at a great disadvantage, and were useless for choral accompaniment work. Additional shutters have been fitted to the top of the box, and this is a great improvement. The whole solo division is enclosed, with the exception of the flûte ouverte, which is very useful in a building with the great resonance of St. Paul's Cathedral.

The solo organ is notable for the number of its reeds and flutes and the diversity of their tones. The number of distinctive reed tones which can be evolved from this section is remarkable: there is a considerable difference between the cor anglais and the corno di bassetto on the solo and choir.

In many of his larger organs, Father Willis put the latter type of stop on both solo and choir organs, as at St. Paul's, and in many cases the choir stop has been removed. Here both have been retained, and their tones are fuller and warmer than the usual clarinet, which so often loses its personality and becomes merely a reedy background. The new French horn, inserted in the place of the old cornopean, of which examples have already appeared at Liverpool and Westminster Cathedrals, is sufficient in itself to show that Henry Willis III. has not only carried on the traditions of the house but has introduced new ideas. French horn tone is exceedingly difficult to copy; but it must be admitted that here the orchestral voice has been reproduced with great fidelity. The viol da gamba, though not keen according to modern ideas, is worth noting, as the old altar organ gambas have been suppressed.

Altar Organ

This small section, playable from either the solo or the choir keys, is entirely new. Formerly consisting of a vox humana and three strings, the altar organ, though delightful in itself, was hardly suitable for its express purpose of accompanying the Holy Communion Service at the altar. It has never been intended for use as an echo organ. The new sylvestrina, so called because of the sylvan calm of its tone, is a Willis specialty. "It is bearded like a gamba, and cut up like a flute," and though it is an accompanimental stop, its harmonic development yields a distinctive tone. The cor de nuit, which is often nothing more than a stopped diapason with a

fanciful name, here has a quiet, restful personality. The name "cor" might suggest a horn, but this, of course, is not the case. It is a flue stop. The fern (echo) flöte brightens the tone, whilst the quintaten makes an excellent soft double for a choir or echo organ. These four stops are in a swell box over the north choir stalls near the altar, and they admirably fulfil the purpose for which the altar organ is needed.

Tuba Organ

The two chancel tubas remain, and the family of tubas in the north-east quarter gallery of the dome has been supplemented with a trompette militaire. Mr. Willis has taken the French cavalry trumpet as his model, and a fine, free tone results, which makes a splendid contrast to the tuba tone already present. The effect of the tuba organ, either for solo or accompanimental work, is without parallel in the world, though it must be remembered that the eleven seconds echo of the dome needs calculating for. Hitherto, the dome section has not been entirely satisfactory, chiefly on account of the blowing apparatus, which was placed with the pipes in the gallery, and latterly, was of indifferent behaviour. The tuba and pedal stops now take their wind from the main blower with good results.

The Pedal Organ

The pedal organ now contains twenty-one stops (and a spare knob,—this is a preparation for a 32ft. bombarde in the dome, which it is no secret Mr. Willis considers necessary to complete the full pedal ensemble). The chancel section has been enriched by the addition of some new 8ft. stops and a 4ft. obtained by extension. One realises the wisdom of this without looking further than the Bach chorale preludes. A greater variety of soft 16ft. stops has been obtained by judicious borrowing from the manual doubles. The new contra bass has great body and definiteness of tone, and forms an excellent mainstay for the chancel flue-pedal stops. This type of stop has been used with great success by the present Henry Willis; to a large extent it combines the fulness of tone of the "open wood" and the bite of a metal stop. A new 32ft. contra violone of metal, the pipes of which are mitred, now appears with the dome section, and is an effective contrast to the 32ft. open diapason of wood: both lie horizontally. The pedal organ must now be regarded as complete, except for the projected bombarde, and it is big and noble in effect.

The Console, &c.

An entirely new electric console was made for the 1926 temporary rebuild, and this with a few modifications has been used in the present instrument. In its fine surroundings the new console is quite as beautiful as the old one and much more convenient. It is impossible to enumerate the many virtues of the modern Willis console. A cathedral organist once remarked that in a five manual instrument, at least one manual gave a difficult or uncomfortable playing position. At St. Paul's, where the organ is more

easy to handle than many a two manual instrument, the keyboards are of the Macpherson-Willis pattern, and the manuals are so inclined as to provide a convenient position when playing on any of them. All the combination pistons are adjustable at the keyboards, and general and manual cancel pistons are provided for "clearing-up" the whole organ or single manuals, respectively. Both lever and balanced swell pedals were fitted to the 1926 console to meet the demands of both conservative and modern organists. The former type of pedal is quite redundant and proved to be of no real use. The full organ and general crescendo pedals (with illuminated indicators) are very effective if used sparingly. The stop and piston "doubles off" remove all 16ft. registers from the manual and 32ft. stops from the pedal. Where massive chords give place to complex counterpoint, such a device is very useful. The electric action is very prompt and gives good repetition; the touch being "top-resistance" is crisp and pleasant, and makes for clean playing.

Finally, here is an organ which cannot be judged by its printed specification. Actually, there is no re-duplication of tone, even when the mere names on the stop knobs might suggest it. The organ has been restored in a manner in keeping with the genius who created it. The few stops by Father Smith are quite mild, and form no essential part of the Willis character of the organ. A great musician remarked that to sneeze in St. Paul's was to make music: even the rumble of the traffic outside is captured by the dome and translated into a pedal note. Thus, an indifferent organ would sound well in the building, but when we have an instrument of the nature of the present one, combined with the acoustical properties of Wren's masterpiece, the effect reaches the heights of sublimity.

THE ORGAN OF 1930

GREAT ORGAN

Double open diapason 16
Lieblich bordun 16
(new, 1930)
Open diapason 1... 8
Open diapason 2... 8
Open diapason 3. 8
Open diapason 4... 8
Tibia 8
Quint ... ... $5\frac{1}{3}$
Principal 1 4
Principal 2 4
(exchange choir, 1930)
Twelfth ... ... $2\frac{2}{3}$
Fifteenth 2
Fourniture ... ... III rks
Mixture ... ... III rks
Trombone 16
Tromba 8
Clarion 4
(last 3 heavy wind)

Swell to great
Swell to great octave
Swell to great suboctave
Choir to great
Chancel tubas on great
Dome tubas on great
Solo to great

SWELL ORGAN
(enclosed)

Contra gamba 16
Open diapason 8
Lieblich gedackt 8
Salicional 8
Vox angelica 8
(bass from salicional)
Principal 4
Fifteenth 2
Cornet ... ... III rks
Contra posaune 16
Cornopean 8
Hautboy 8
Clarion 4
(last 4 heavy wind)
Swell octave
Swell suboctave
Solo to swell

CHOIR ORGAN

Contra viola 16
Open diapason 8
Violoncello 8
Clarabella 8
Lieblich gedackt 8
Dulciana 8
Gemshorn 4
(new 1930)
Flûte harmonique 4
Nazard ... ... $2\frac{2}{3}$
(new 1930)
Flageolet 2
Tierce ... ... $1\frac{3}{5}$
(new 1930)
Corno di bassetto 8
Cor anglais 8
Trumpet 8
(exchange solo, 1930)
Altar on choir
Swell to choir
Solo to choir
Tubas to choir

TUBA ORGAN

Dome tubas:
Double tuba 16
Tuba 8
(harmonic)
Clarion 4
(harmonic)
Trompette militaire 8
(new 1930: harmonic trebles: 30in. wind)

Chancel tubas:
Tuba harmonic 8
(harmonic)
Tuba clarion 4
(harmonic)

SOLO ORGAN
(enclosed)

Open diapason 8
Viola da gamba 8
Flûte harmonique 8
Concert flute 4
Piccolo 2
Contra posaune 16
Contra fagotto 16
Trumpet 8
French horn 8
(new 1930)
Corno di bassetto 8
Cor anglais 8
Orchestral oboe 8
Flûte ouverte 8
(unenclosed)
Altar on solo
Solo octave
Solo suboctave
Tubas on solo

ALTAR ORGAN
(enclosed: new 1930)

Quintaten 16
Cor de nuit 8
Sylvestrina 8
Fern flöte 4
Tremolo to altar organ

PEDAL ORGAN

Dome section:
Double open bass (fr. open bass 1) 32
Contra violone 32
(new 1930)
Open bass 1 16
Open bass 2 16
Open diapason 16
Principal 8
Violoncello 8
Mixture ... ... III rks
Contra posaune 32
Bombarde 16
Clarion 8
(last 2 heavy wind)
Spare knob

Chancel section:
Open bass 16
Contra bass 16
(new 1930)
Violone 16
Bourdon 16
Open metal 16
(from great)
Viola 16
(from choir)
Octave 8

PEDAL ORGAN—*continued*

Flute 8
(new, 1930)
Octave flute 4
(extension of above)
Ophicleide 16
(heavy wind)
Great to pedal
Swell to pedal
Swell to pedal 4ft.
Choir to pedal
Solo to pedal
Solo to pedal 4ft.
Great pistons on pedal pistons
Great and pedal pistons coupled
Pedal stops off
Doubles off
Tuba to pedal

ACCESSORIES

†Thumb pistons:
8 to great 8 to swell
6 to choir 8 to solo
4 to tuba
†Toe pistons:
8 to pedal

Reversible pistons (in key-slips):

Tuba to pedal	Tubas to solo
Solo to pedal	Solo to swell
Swell to pedal	*Tubas to great
Solo to great	Choir to great
*Swell to great	*Great to pedal
Doubles off	*Pedal stops off
Tubas to choir	Altar on choir
Solo to choir	Choir to pedal
Altar on solo	*Swell to choir

Great & pedal pistons coupled
Great pistons to pedal pistons
(*) duplicated on pedals
(†) all adjustable at the keyboards on the latest "Willis" system
4 general pistons acting over all stops and couplers, and duplicated in key frames on either side
1 individual cancel piston to each manual
1 general cancel piston
1 locking piston for adjustable pistons
1 general crescendo by balanced pedal, with indicator
1 full organ effect by reversible toe piston, with indicator
Two electric rotary blowing plants with dynamo generators, for supplying low voltage current for action

WIND PRESSURES: 1930 REBUILD

2⅜in. *Choir*: Flue work (except flute harmonic, nazard and tierce).
Pedal: Viola (from Choir).
3½in. *Great*: Flue work (except double open diapason treble, open diapason No. 1 treble, principal No. 2 treble and lieblich bourdon).
Swell: Flue work.
Choir: Flûte harmonique, corno di bassetto and cor anglais.
Solo: Flue work, corno di bassetto and orchestral oboe,
Altar Organ: Entire section.
Dome Pedal: Double open bass and open bass No. 1.
Chancel Pedal: Except contra bass, viola and ophicleide.
3⅝in. *Pedal*: Open bass No. 2 (Dome) in treble.
4½in. *Choir*: Tierce, nazard and trumpet.
Dome Pedal: Open bass No. 2 (in bass) and open diapason.
5in. *Great*: Lieblich bourdon, trebles of double open diapason, open diapason No. 1, principal No. 2.
6in. *Dome Pedal*: Contra violone.
6⅜in. *Dome Pedal*: Violoncello, mixture, contra posaune.
7in. *Great*: Reeds.
Swell: Reeds.
Solo: Contra fagotto, French horn, cor anglais.
10in. *Chancel Pedal*; Contra bass.
15in. *Chancel Tubas*: Bass.
17in. *Solo*: Contra posaune, trumpet.
Chancel Tubas: Treble.
Pedal: Ophicleide.
20in. *Dome Tubas*: Bass (except trompette militaire).
Dome Pedal: Bombarde, clarion.
25in. *Dome Tubas*: Trebles (except trompette militaire).
30in. *Dome Tubas*: Trompette militaire.[18]

All the stops are by the firm of Willis with the exception of the following:—

Great Organ: Part of double open diapason (by Smith).
All of diapason No. 3 except a few treble notes (by Smith).
Bass, 22 notes (not CC), principal No. 1 (by Smith),
Bass octave (not CC) of fifteenth.
Choir Organ: A few low notes contra viola (by Smith).
Pedal Organ: Open bass No. 2, Dome (by Bishop).
Open diapason, Dome (a few top notes by Smith).

[18] Presented by Mr. Henry Willis.

TABLE SHOWING NUMBER OF REGISTERS IN EACH DEPARTMENT.*

Date.	*Manuals*	*Great*	*Choir*	*Swell*	*Solo*	*Tuba*	*Pedal*	*Couplers*	*Total*
1694	3	12	9	6 *(echo)*	—	—	—	—	27
1800	3	13	8	6	—	—	—	—	27
1849	3	13	8	7	—	—	1	4	33
1863	3	16	8	8	—	—	2	9	43
1872	4	14	11	12	6	—	9	10	62
1897-1900	5	16	11	12	17 †	5	15	27	103
1926-29	5	16	11	12	13	2	10	28	92
1930	5	17	14	12	16 †	6	22	29	116

* Completed from *The Organ*, Vol. II. (No. 5), page 13.
† Including Altar Organ, four stops.

BLOWING

The gas engine, and the original Willis blowing cylinders supplying the main organ, and the small high-pressure hydraulic plant in the dome have been removed. The former, though reliable, filled the pneumatic work of the organ with oil, whilst the latter was often leaky, and only adequate to supply a portion of the dome with wind. Electric "Duplex" blowers, driven by "Bull" motors, now supply the wind, and the plant is in duplicate.

The Small Organ

A SMALL instrument, built on a movable platform and weighing about two tons, was built by Henry Willis in 1881 and has proved very useful. It contained the following stops:—

GREAT ORGAN
(CC to G)

Open diapason	8
Lieblich gedackt	8
Principal	4
Fifteenth	2

COUPLERS

Swell to great
Swell to pedals
Great to pedals

SWELL ORGAN
(CC to G)

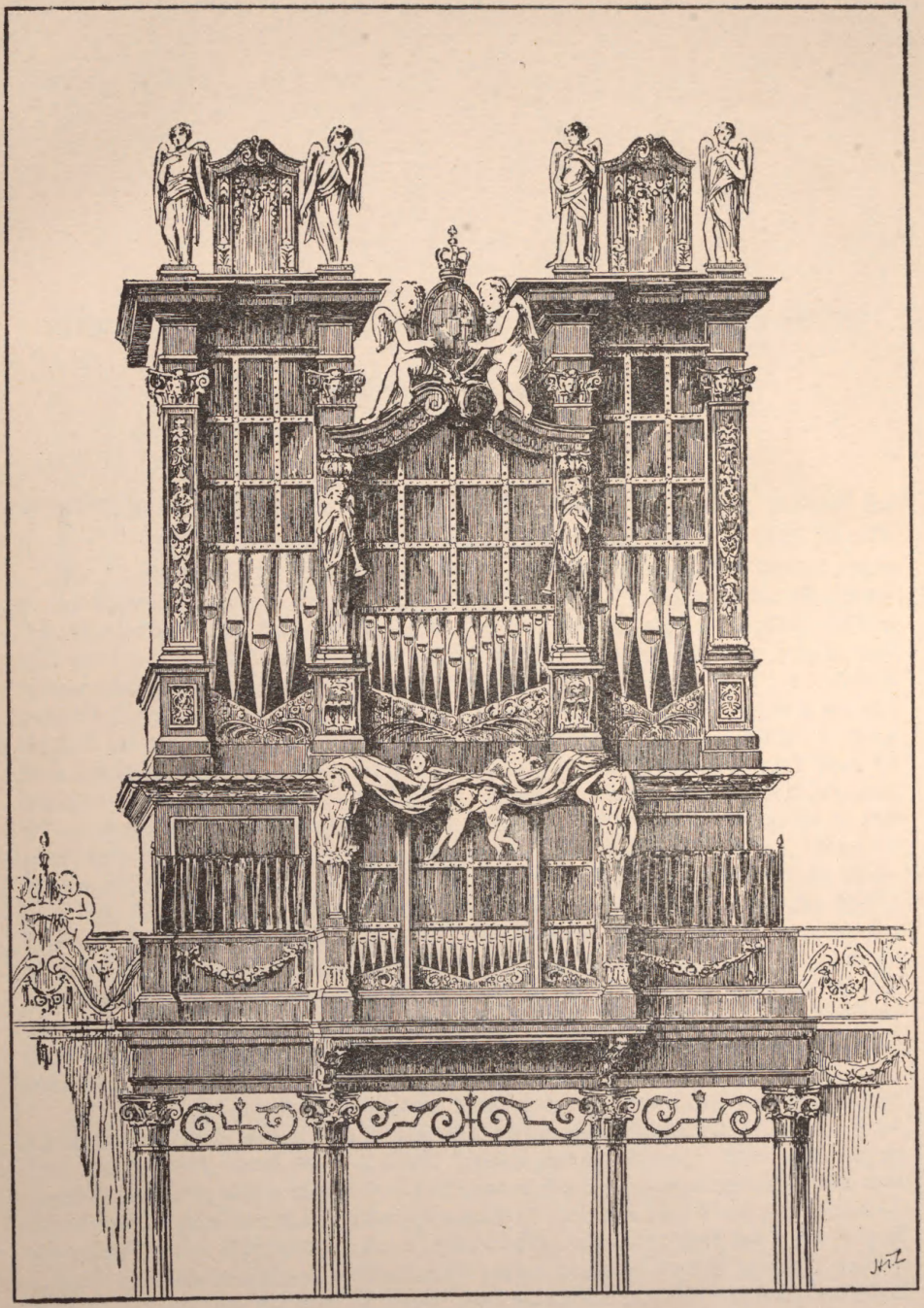
Open diapason	8
Gemshorn	4
Cornopean	8

PEDAL ORGAN

Bourdon	16

Concave and radiating pedal-board.
Tubular-pneumatic action to pedals.

This organ, a little masterpiece in organ building, with tubular-pneumatic action supplied throughout and superoctave and suboctave couplers, was used during the recent rebuilding operations in the Cathedral.



The East Front from 1697 to 1826

(From a drawing by H. T. Lilley)

Stanley Marchant, the Present Organist

Mus.D. (Oxon.), F.R.C.O., F.R.A.M.

THE distinguished organist of St. Paul's Cathedral started his musical career as a chorister and organ pupil of Dr. H. W. Richards at Lancaster Gate. Later, he studied for seven years at the Royal Academy, under his predecesor at St. Paul's, Charles Macpherson, and others, and he won the Goss Scholarship for organ playing. While still at the academy, he became organist of Kemsing Parish Church, and subsequently of Christ Church, Newgate Street (Greyfriars), a church famous for its memories of Wesley and Mendelssohn, and "within a stone's throw" of the Cathedral. Sir George Martin invited Marchant to play voluntaries, and to take an occasional service at the Cathedral, and thus he became second assistant at St. Paul's. Since the days of Sir John Stainer, it has become almost a tradition that the assistant organist succeeds to the post left by the death or retirement of his chief. In 1913, Stanley Marchant was appointed organist of St. Peter's, Eaton Square, where there is a fine four manual instrument by Lewis (now absorbed in the Willis firm). Sir George Martin died in 1916, and Dr. Charles Macpherson succeeded him, thus making Marchant the first assistant. As the work of sub-organist at the Metropolitan Cathedral is so great, the post at St. Peter's had to be relinquished. During the war, he served as an instructor in musketry, subsequently went to France, and ultimately became a bandmaster.

Dr. Marchant has high academic attainments; he is a brilliant performer, appreciating and using to the full the latest developments of organ tone and mechanism; and he is a choir trainer *par excellence*. He is an organ professor, fellow, and a member of the committee of management of the Royal Academy; examiner for degrees in music at London and Durham Universities, and for the diplomas of the Royal College of Organists, &c. He is well known as an adjudicator, lecturer and composer, and in the latter capacity he was responsible for the *Te Deum* used at the re-opening of the Cathedral in June, 1930. He is an authority on the use of the organ with the orchestra, and he has played the organ in concertos at Queen's Hall for Sir

Henry Wood. The writer can testify to the superb skill and judgment in the use of the St. Paul's instrument at the oratorio services, when the members of the London Symphony Orchestra were in attendance, and the late Dr. Macpherson conducted.

Mr. Douglas Hopkins, F.R.C.O., a brilliant young performer and conductor, and formerly organist of Christ Church, Newgate Street, is sub-organist at the Cathedral, and he was responsible for much of the organ playing at the re-opening ceremonies. The two recital programmes played by Dr. Marchant to mark this occasion were as follows:—

Tuesday, July 1st, 1930, at 6 p.m.

1. Prelude and Fugue in B minor ..... *J. S. Bach*
2. Andante con moto ("Italian" Symphony) ..... *Mendelssohn*
3. Voluntary in C ..... *Maurice Greene*
4. Fantasy Prelude ..... *Charles Macpherson*
5. Pastoral Symphony ("Christmas" Oratorio) ..... *J. S. Bach*
6. Fantasia Toccata in D minor ..... *C. V. Stanford*
7. Aria ..... *Paradies*
8. Finale (Sonata in F minor, No. 7) ..... *Rheinberger*

Saturday, July 6th, 1930, at 6 p.m.

1. Fantasia and Fugue in G minor ..... *J. S. Bach*
2. Larghetto (Clarinet Quintet) ..... *Mozart*
3. Choral in A minor ..... *César Franck*
4. Adagio in E flat ..... *John Stainer*
5. Basso Ostinato ..... *Arensky*
6. (*a*) Awake the trumpet's lofty sound ("Samson") ..... *Handel*
   (*b*) Larghetto in B minor
7. Andante Espressivo (Sonata in G major) ..... *Edward Elgar*
8. Chorale Prelude, "Old 104th" ..... *C. H. H. Parry*

The Organists

of St. Paul's Cathedral

John Redford	1530
Thomas Giles	1549
Thomas Morley, Mus.B.(Oxon.)	1591
John Tomkins, Mus.B.(Cantab.)	1622
Adrian Batten (joint organist with Tomkins) ...	1624
Albertus Bryan (or Bryne)	1638
Isaac Blackwell...	1687
Jeremiah Clarke...	1699
Richard Brind	1707
Maurice Greene, Mus.D.(Cantab.)	1718
John Jones	1756
Thomas Attwood	1796
Sir John Goss, Mus.D.(Cantab.)	1838
Sir John Stainer, M.A., Mus.D.(Oxon.)	1872
Sir George Martin, Mus.D.(Cantuar.)	1888
Charles Macpherson, Mus.D.(Dunelm.), F.R.C.O. ...	1916
Stanley Marchant, Mus.D.(Oxon.), F.R.C.O.	1927

Henry Willis, Organ Builder

1820 - 1901

IT is a fact that very little of the life-story of Henry Willis the Elder has ever been placed on permanent record. Grove gives an appreciative column to the organ-builder, with only slight references to the man. The main incidents of his life are available in the *Dictionary of National Biography*, but that is not often consulted by those interested in organs: and yet interest in the master-builder of organs grows year by year, while those who knew him personally are passing on. It may be said that only now, thirty years after his death, is Willis's great ability accepted without demur by all sorts and conditions of organ lovers. With many he was revered as a Father; but there were others who could not accept new ideas with judicial calmness, and there was no faithful Boswell recording Willis's rejoinders to those who stood in his path. One irate person, alluding to the instrument at the Albert Hall, exclaimed: "Call that an organ; why, it's an American steam devil!" Another, speaking of Willis's work at the Alexandra Palace and Albert Hall, found therein "examples of over wind-pressure, and of music giving place to noise;" whilst a third in his anger declared that "vulgar wonderment only is nourished by such structures as the organ which has been placed in the Royal Albert Hall." It was these or such as these who, finding themselves ignored, spread abroad the legend of the taciturnity of Willis. But characteristics of his time must not be taken too literally by those who live in an age when manners and customs have changed: many speak too freely now-a-days. Perhaps one basis for the thought is the disagreement with William T. Best over the organ at St. George's Hall, Liverpool; but incidents concerning the temperament of Best would incline people to take sides with Willis. Best had an unfortunate habit of quarrelling, and seemed never to have been happy unless he was covering his victims with ridicule or making them the butt of his mordant wit. To his friends, Willis was genial and kindly: but he went his way with no uncertain step, sure in his knowledge and ability. A portrait of him still extant shows a fine face and head, the strong features suggesting confidence to accomplish. Maybe he could not bear fools gladly. We should think, also, that he, a musician of some attainments, was not sympathetic to the purely scientific mind: and hence his independence of

thought with regard to some of the conclusions of Alexander J. Ellis, the translator of Helmholtz and author of *The History of Musical Pitch.* Some people have suggested that in his later years he had the bearing of a disappointed man: but he worked to the end, which came within two months of the completion of his eightieth year. By this time his conquest of the world of organ building was complete: he had built or rebuilt over one thousand organs. There was nothing left for others but to follow. The firm was laden with commissions, it being said at the time of his death that it was unable to begin new work within two years. Doubtless, no great rewards had come to Willis: but no organ builder in England ever has been adequately recompensed. Of his pleasures, we have been told that he was able to indulge in yachting on a very modest scale. Henry Willis had a brother George associated with him in business until his death in August, 1871. George was a great reed voicer, and the last of his work was embodied in the organ at Albert Hall. Henry Willis was the son of a London builder, and had three daughters and two sons. He married twice, the second time very late in life (1894). He died at 57, Lawford Road, Kentish Town, London, and is buried in Highgate Cemetery, which for the benefit of intending visitors, we may state lies within two miles north. Those who delight in civic pride will note how Willis was first and last a Londoner. Born in London, he learned his craft with a London organ builder. His first place of business was in Manchester Street, near to King's Cross, whence he migrated to 119, Albany Street, Regent's Park; and then, after a short stay in King Street, Camden Town, he settled at the Rotunda in Rochester Place, Camden Town, the site of which is now occupied by a portion of a large Council school. Some time after the death of Henry Willis in 1901, it seemed that the Book of Willis was to close: but time has shown that only the first chapter had been written. Other chapters follow on lines well and truly laid.

Of the little that has been recorded of Henry Willis the man, the appended obituary notice that was published in *Musical Opinion* for March, 1901, the month after his death, contains various details of his life not printed elsewhere. We feel sure that they will be read with interest. We have now no knowledge as to the identity of the writer, though we incline to the opinion that it was the work of Mr. Vincent Willis, the eldest son. Vincent was a man of real distinction, though those who met him could but remark his retiring disposition. He left the business in 1894, and devoted himself mainly to the improvement of the player and residence organ. His son Henry Vincent is now resident in America, where doubtless many of the best traditions of English organ building are being reproduced under names and conditions that do not suggest their true origin.

A small commentary on the recorded facts of Henry Willis may here be permissible. An intriguing reference is that of his early association with an organ builder named W. E. Evans, who is said to have kept a music shop at Cheltenham at the time. But the W. E. Evans indicated is, of course, none other than Wardle Eastland Evans, and he in 1858 was living in

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Norfolk Street, Sheffield; later, in 1865, he described himself as of Holles Street, Cavendish Square, where Mr. D. J. Blaikley has told us he was associated with Thomas Boosey in the improvement and manufacture of the harmonium. Obviously, Willis had left Evans long before this; but we can imagine that Willis playing the double bass at the Gloucester Festival of 1847 sprang out of his early connection with Cheltenham. Evans was a genius with reeds: and it would be most interesting to enquire whether this side of the genius of Willis was wholly inherent, or whether it came of his early connection with another inventive mind. Evans is remembered for his production of various types of reed instruments, one of which he styled the orchestrina di camera. In this he claimed to imitate to perfection the tone of the flute, oboe, clarinet, bassoon and French horn. Whether or not Evans influenced his youthful assistant, it is a fact that Willis developed his reeds independently, using Cavaillé-Coll's idea of harmonic trebles, with heavy pressure for this part of the scale.

The republication of the notice is fitting at a time when one of Henry Willis's great masterpieces has been placed in a condition for further service in the high office of religious musical art by a grandson full of equally worthy ideals and endeavour.

"THAT the father of English organists and the father of English organ builders should pass away within a few weeks of each other is a sufficiently sad coincidence. Dr. Hopkins had reached his eighty-third year; Mr. Henry Willis was just eighty. Both were still young in their hearts, young in their enthusiasm, in their alertness, almost in their physical vigour. The history of Mr. Willis's career should be exceedingly interesting to organists. Born in London in 1821, he doubtless acquired his musical tastes from his father, for the elder Willis sang in the choir of the old Surrey Chapel, Blackfriars Road, and played the kettledrum for the Cecilian Society. Young Willis, at any rate, began to play the organ early. He was acquainted with the elder Cooper (Attwood's assistant at St. Paul's); and presently young George Cooper (afterwards organist of the Chapel Royal) and he were trying to rival each other in pedal playing, which was then not such an advanced branch of organ technique as it is now. When he was fourteen Henry Willis was articled for seven years to John Gray (afterwards Gray & Davison), the organ builder; and it was during his apprenticeship that he invented the special manual and pedal couplers which he continued to use in his instruments to the last. He was still an apprentice when he became organist of Christ Church, Hoxton, of which the father of Mr. Clement Scott (the well known dramatic critic) was vicar. There was some doubt about appointing him because of his youth, but Willis overcame all objections on that score by a masterly performance of the Hallelujah Chorus. This post had to be given up when Willis completed his apprenticeship, for he then went to Cheltenham for three years as assistant to the late W. E. Evans, an organ builder who also

kept a music shop. It was, however, only the first of several posts which Mr. Willis held. In the early fifties he was organist of Hampstead Parish Church, and it was not so many years ago that he resigned his appointment at the Islington Chapel-of-Ease [now St. Mary-Magdalen], where he had served for thirty years. In spite of the engrossing claims of his business, we read that he 'discharged his organ duties with commendable faithfulness. He would often travel one hundred and fifty miles on a Saturday in order to be present at the Sunday service.' It may be added that Mr. Willis was also a contra-bassist. In this capacity he played at the Gloucester Festival of 1847, and also in the orchestra at the Handel Festivals of 1871 and 1874.

"Henry Willis started in business for himself in 1845. That year he rebuilt the organ at Gloucester Cathedral, and laid the first step in his great ladder of success. He received £400 for the work, and celebrated the event by promptly getting married. Then came the great exhibition of 1851, and with it the first really great organ built by Willis. 'That exhibition organ,' said Mr. Willis himself, 'was the pioneer of the improved pneumatic movement. A child could play the keys with all the stops drawn. It never went wrong. The instrument was absolutely my own in every detail: not a ghost of an individual had any part or lot in its conception or design.' Here for the first time pistons were introduced between the key slips to replace the old clumsy composition pedals; and there was a further novelty in the running of the pedal board up to G. Out of this this instrument came, in a very direct manner, the order to build the organ for St. George's Hall, Liverpool. Two other organs by London builders were in the exhibition, and a committee of the Liverpool Corporation came one morning early to hear all three instruments. The other builders had engaged special organists in view of the meeting; Willis had made no such provision. However, young Best was hanging about, and the committee, on Willis's recommendation, asked him to show off the organ. Best characteristically declined unless he was paid a fee of five guineas. That matter was arranged, the instrument was played as only Best could play it, and Willis had the order for Liverpool within half an hour. When the organ was finished the committee asked Willis about an organist. 'Why don't you get Best?' he replied, and accordingly Best was appointed. In recent years some friction had occurred between Best and Willis, so that Best declined to play on any organ of the Willis make. The matter has never been satisfactorily explained, but whatever was the cause of the estrangement, Mr. Best's action was hardly commendable considering what Willis had done for him in the earlier years of his career.

"Mr. Willis's next important commission was the Royal Albert Hall organ, which still remains the largest of his instruments. After that came the St. Paul's Cathedral organ, which, it is interesting to note at the present time, was first used at the Thanksgiving Service for the recovery of the Prince of Wales in 1872. A curious incident happened in connection with the inauguration. The pedal organ was completed, but it had been found impossible to get the pneumatic action for it done in time. Accordingly,

Mr. Willis constructed a temporary pedal-board, made the necessary connections, and himself played the pedal part while Cooper in the regions above attended to the manuals!

"It would occupy too much space to give anything like a complete list of even the more notable of the Willis organs. The cathedral list includes Canterbury, Carlisle, Durham, Exeter, Hereford, Lincoln, Oxford, St. David's, Salisbury, Truro, Wells, Winchester, Glasgow, Edinburgh (St. Mary's), and Aberdeen. For the Alexandra Palace he built two large organs. The instruments in Windsor Castle and Union Chapel, Islington, are also his. In all his work he showed the true artist. He took infinite pains over even the smallest details, and there was no department in his factory to which he did not give his personal attention. Every pipe went through his own hands. In short, he was an enthusiast, and fully deserved his great and many successes."

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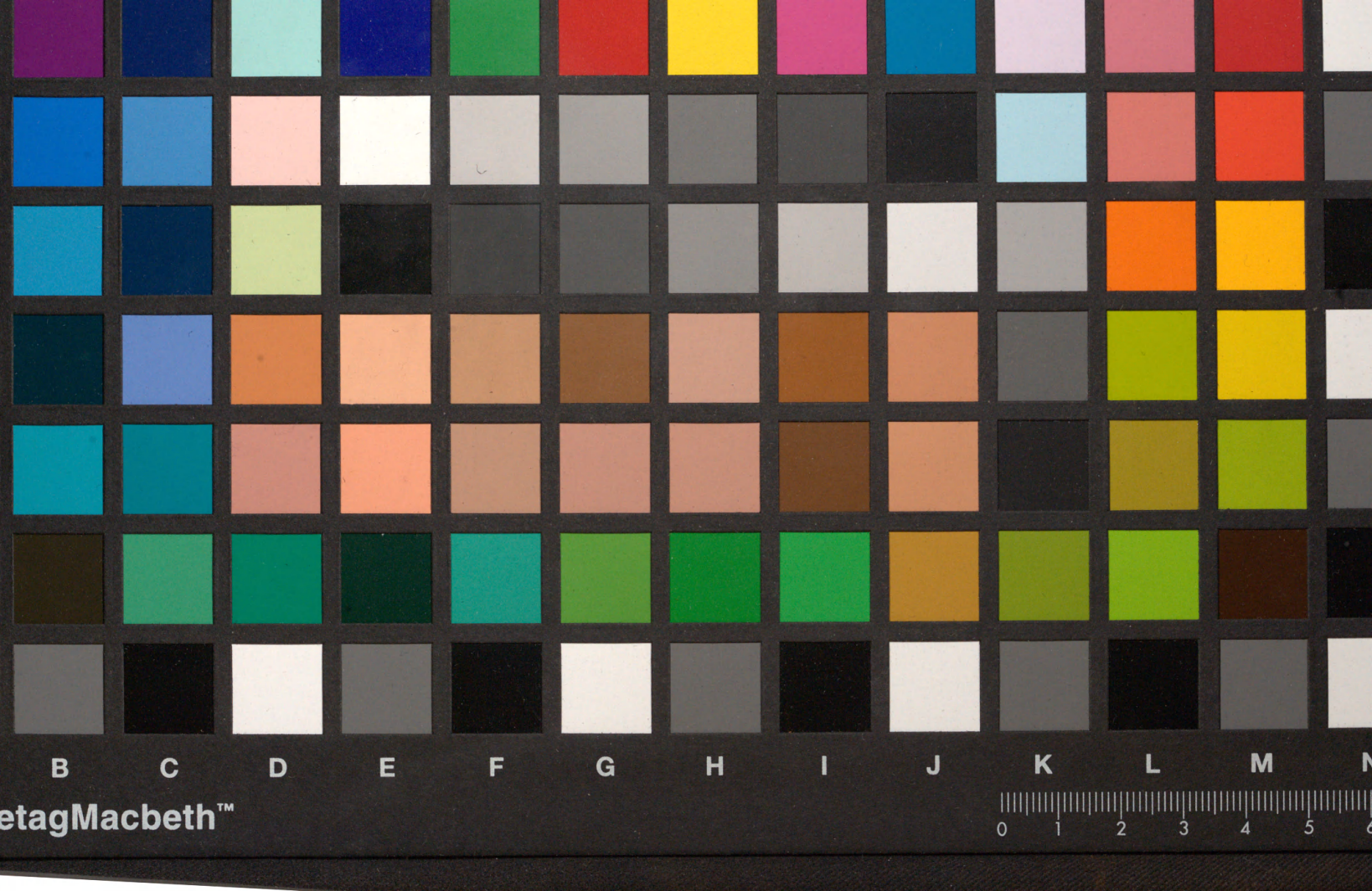
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